1985-86
ANNUAL
REPORT

ANIMAL INDUSTRY DIVISION

Alberta
AGRICULTURE

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ALBERTA AGRICULTURE

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ANIMAL INDUSTRY DIVISION

The division's five branches responded to the needs of producers and agribusiness concerned with production and marketing of meat producing animals and poultry.

The division's activities included extending technical information to producers and agribusiness, solving production problems, liaising with other segments of government to improve service to producers, administering and updating acts and regulations in concert with industry requirements, as well as advising on and participating in pertinent applied research projects.

The division continued negotiation with the federal government and other provinces in a red meat stabilization program. An interim insurance plan was introduced to cover April 1, 1985 to September 30, 1985 and a national red meat stabilization program was introduced early in 1986.

The division was also involved in other producer assistance programs such as the Canada-Alberta livestock drought assistance program, the Alberta feed grain market adjustment program and the Alberta livestock assistance program.

BEEF CATTLE AND SHEEP BRANCH

I. INDUSTRY OVERVIEW

A. Beef Cattle

The number of cows and heifers kept for breeding in Alberta as of January 1, 1986 was 1.27 million head, down 6% from the same date in 1985. The Canadian beef breeding herd declined by 4% in 1985.

Females represented 53% and 54% of the total beef slaughtered in Alberta and in Canada. A female slaughter ratio of more than 48% represents a liquidation. The continued liquidation of the breeding herd resulted from low market returns, rising costs, and very dry pasture conditions over much of the province for the last two years.

By year end, many industry analysts were concerned that the serious depletion of the Canadian beef herd would result in a supply shortage in 1987 and 1988.

By early 1986, there were signs that the rate of liquidation was slowing with first quarter cow slaughter down 9% from the previous year. In March, the slaughter of both heifers and cows was down 4% and 8%, respectively, from 1984.

Calgary slaughter steer prices in 1985 averaged $74.18 per hundred weight compared with $75.53 in 1984. The market was relatively strong early in the year but fell to the $64.00 to $68.00 range from July to September, $4.00 to $6.00 below those in the same period in 1984.

Edmonton heavy feeder steer prices averaged $76.12 per hundred weight in 1985, about $0.50 over 1984 prices. Weaned steer calves in

Edmonton averaged $84.00 per hundred weight in 1985 with a high of $88.64 in June and a low of $78.99 in August.

Many producers went into the winter with plans for utilizing low quality roughage supplemented by grain feeding. November was very cold which significantly increased feed requirements. The rest of the winter was unseasonably mild which was a blessing to the cattle industry. Cows came through the winter in good condition on less feed than anticipated. Feeder cattle gained exceptionally well and came to market about one month sooner than normal. A normal number of calving and scour problems were reported during the spring. Late snow storms had only a minor effect on cattle.

The provincial feed grain market adjustment program and lower market prices for feed grains significantly lowered cattle finishing costs in late 1985 and early 1986. These reduced costs resulted in a better price for feeder cattle.

Early in 1986, the provincial government entered into an agreement with the federal government for a "tripartite" program to stabilize incomes in the red meat sector. Premium costs of this voluntary program are shared by producers and the federal and provincial governments. Payments are to be made to enrolled producers when returns fall below a specified percentage of the long term rolling average.

B. Sheep

Canadian sheep and lamb numbers were estimated at 748,000 on July 1, 1985, down 5% from 791,000 at the same date in 1984. Over this period, sheep one year of age and older decreased by 5% while sheep under one year of age decreased by 6%.

Table 1

Number of Sheep on Farms in Alberta
July 1, 1984 and 1985

	1984	1985	1985/1984 %
Alberta	190.0	176.6	93
Eastern Canada	436.8	425.2	97
Western Canada	354.0	323.0	91
CANADA	790.8	748.2	95

Source: Alberta Agriculture, Statistics Branch, Sheep Numbers #2, September 25, 1985.

In Alberta, total sheep and lamb numbers had declined by 3% from 1984 while the breeding flock of sheep one year and older decreased 9%. This decrease for the second consecutive year resulted from relatively low rates of return in 1984 and at least two years of drought in the major sheep raising areas of southern Alberta.

Sheep and lambs slaughtered at provincially and federally inspected plants in Alberta totalled 91,673 head in 1985, down 19% from the 112,794 recorded in 1984. In 1985, processing of sheep and lamb in Alberta represented 37% of the national total.

Canadian imports of dressed lamb and mutton in 1985 totalled 23.1 million pounds, an increase of 10.5% from 1984. There was concern in the third and fourth quarters that New Zealand and Australia were exporting more fresh chilled lamb to Canada. They have traditionally exported the frozen product. In 1985, imports of lamb from Australia increased by 289% while those from New Zealand increased by 120%. New Zealand still maintained an 80% share of lamb and mutton import market in Canada. Prices for A and B lambs in the first three quarters of

1985 ranged from $75.00-$84.00 per hundred weight live, 20-25% higher than the same period of 1984. Fourth quarter prices in 1985 fell by only 5-10% over 1984.

II. PROGRAMS

A. Alberta Feed Grain Market Adjustment Program

The Alberta Feed Grain Market Adjustment Program was initiated on September 1, 1985. Its purpose is to restore the natural advantage of Alberta's livestock industry by offsetting the distortion in feed grain prices. This distortion resulted from the method of payment of the federal Crow benefit directly to the railways. During the 1985-86 crop year, the average distortion in the price of feed grain in Alberta was estimated to be $21.00 per tonne.

The program was designed to emulate the recommendations of the Report of the Committee of Inquiry on Crow Benefit Payment. The report stated that the federal Crow benefit should be paid to the grain producer (and not the national railways) based on net sales.

In general, the certificate option of the program was designed to pay a Crow benefit on feed grain transactions where the grain was used for final consumption as livestock feed within the province. Registered feed users were issued certificates as partial payment for eligible feed grains. Feed grain producers presented these certificates for reimbursement to Alberta Agriculture. The farm-fed option of the program was designed to provide a similar benefit on grain produced and consumed within the same legal entity.

The following table represented the status of the program from September 1, 1985 to March 31, 1986.

Table 2

Alberta Feed Grain Market Adjustment Program

September 1, 1985 to March 31, 1986

		Total To Date
1)	Total number of applications received	22,325
2)	Pending	318
3)	Total number of applications checked and approved:	
	Certificate Option — To Date: 5,953	
	Farm Fed Option — To Date: 9,960	
	Both Options — To Date: 6,094	22,007
4)	Total number of merchant applications approved	219
5)	Number of amendments received on approved applications: Received	1,607
6)	Total number of 'A' Certificates issued	114,779
	Total number of 'B' Certificates issued	67,918
7)	Number of farm and merchant inspections to date	4,107*
8)	Total number of cheques issued by district offices and headquarters	30,999
9)	Total dollars issued on Certificate option to date	$26,380,102.16
10)	Total number Farm Fed Claim Forms	3,712
11)	Completed	3,206
12)	Pending	506
13)	Total dollars paid out on Farm Fed Option	3,484,236.00
14)	Total paid out on Program	29,864,338.16

* This number reflects audits being made under the Alberta Feed Grain Market Adjustment Program, Red Meat Interim Insurance Payment Program, Federal-Provincial Livestock Drought Assistance Program, and Alberta Livestock Assistance Program.

B. Canada - Alberta Livestock Drought Assistance Program and the Alberta Livestock Assistance Program

The drought in southern Alberta in 1984 was followed by an even worse year in 1985. In 1985, the drought, compounded by very hot weather in late June and the first half of July, covered the entire province. Occasional showers in the north central part of the province resulted in good cereal crop production but occurred too late for the production of good hay crops and pastures. The harvest was severely hampered by wet cold conditions but did result in some late season growth of forage particularly in southern Alberta. Two programs were implemented to assist livestock producers cope with the resulting financial loss and maintain viable breeding herds.

The Canada - Alberta Livestock Drought Assistance Program was jointly funded by Agriculture Canada and Alberta Agriculture. Sixty-six million dollars was budgeted for the program of which 30 million came from Agriculture Canada. The balance was funded by Alberta Agriculture. In the area most severely hit, the program awarded a grant of $75.00 for each female of breeding age for beef, dairy, bison and horses, and $15.00 for each female of breeding age for sheep and goats. The area less severely hit received $45.00 for each female of the larger species and $9.00 for each female of the smaller species. About 19,000 applications were made for assistance.

The Alberta Livestock Assistance Program was implemented two months later when the severity of the drought was assessed in the north central and north eastern part of the province. Coupled with the spring weather and poor fall, the livestock producers were facing substantial financial difficulty.

Seventy-two and one half million dollars was budgeted for the program. Producers received $75.00 for each breeding female of the larger species and $15.00 for each breeding female sheep and goat, i.e. same as severe zone of Canada-Alberta program. In addition to the designated area, the program supplemented the moderate zones of the Canada-Alberta program to bring the level of payment up to equal the severe zone. About 12,900 applications were received for this program.

C. Animal Reproduction

The artificial insemination (A.I.) industry in Canada continued to be healthy although total cows bred by artificial insemination in Alberta declined slightly in 1985. Approximately 45% of the dairy cows and 4% of the beef cows were bred by artificial insemination in Alberta.

Canadian exports of semen in 1985 accounted for $14.8 million in sales, up 1.4% over 1984. Semen produced in Alberta and sold outside the province amounted to $4.93 million in 1985 with the beef breeds accounting for most of the sales.

Alberta embryo transfer businesses continued to be leaders in Canada. Four facilities operated in Alberta in 1985. Most embryo transfers were in the beef breeds though dairy breeders have shown more interest. The outlook for embryo transfer remained bright on both the domestic and international market. The export of embryos in lieu of live animals on foreign markets has increased dramatically with export sales from Alberta of just under $10 million.

In 1985, the number of dairy cattle inseminated by licensed A.I. technicians increased slightly over 1984 even though the total dairy

herd decreased by about 4,000 cows (Table 3). The total beef cows inseminated by technicians continued to decline (Table 3).

Table 3

Dairy and Beef Cows Bred Artificially
By Licensed Inseminators in Alberta

	Dairy Cows			Beef Cows		
Year	Number in Alberta	Bred by A.I.	% of Total	Number in Alberta	Bred by A.I.	% of Total
1980	140,000	23,541	16.8	1,515,000	12,931	0.8
1981	158,000	18,995	12.0	1,385,000	8,920	0.6
1982	160,000	16,015	10.0	1,310,000	9,285	0.7
1983	157,000	10,727	6.8	1,290,000	9,585	0.7
1984	157,000	10,485	6.7	1,286,000	7,705	0.6
1985	153,000	10,495	6.9	1,220,000	6,901	0.57

In 1983 (the last year data is available), 176,645 doses of semen were sold in Alberta. These sales included 99,320 doses of dairy semen and 77,325 doses of beef semen.

The Semen Evaluation Laboratory at Airdrie handled 900 samples of semen from various species during the 1985-86 fiscal year (Table 4):

Table 4

Number of Semen Samples Evaluated
in Last Three Fiscal Years

Species	1985-86	1984-85	1983-84
Cattle	818	900	835
Deer	4	-	-
Dogs	-	1	-
Foxes	6	-	-
Horses	-	-	4
Sheep	-	1	21
Swine	33	15	49
Turkeys	38	-	-
Yak	1	5	10
Total	900	922	919

The number of samples evaluated in 1985-86 was consistent with those evaluated in the previous two years. Samples were evaluated for total sperm count, percent motility, morphology (percent primary and secondary abnormalities) and percent sperms with intact acrosomes.

Forty-four of the 900 samples evaluated in 1986 were from experimental projects on fox (6 samples) and turkey reproduction (38 samples).

Of the 856 regular samples received at the laboratory, 465 were either from males suspected of producing inferior quality semen or were suspected to have been improperly stored after processing. Eighty percent (370) were judged substandard after evaluation. The remaining 391 samples were submitted for routine monitoring and 200 (51%) of these did not satisfy the four semen quality guidelines prescribed by Alberta Agriculture. A large portion of these 200 samples were drawn from young bulls entering an A.I. stud for the first time and in most cases were only marginally below the quality guidelines.

The sources of cattle semen received at this laboratory during the last three years, the number of samples received from each source and the number that were judged substandard are listed below:

Table 5

Source of Semen Samples	Number of Samples Received			Number of Substandard Samples		
	1985-86	1984-85	1983-84	1985-86	1984-85	1983-84
A.I. Studs	715	842	655	459	444	276
Inseminating Businesses	24	15	15	22	9	9
Private Breeders	40	35	46	30	25	23
Breed Associations	-	1	13	-	-	2
Alberta Agriculture	25	1	86	18	-	51
Embryo Transfer Businesses	3	-	-	3	-	-
Veterinarians	10	6	20	10	6	13
Total	817	900	835	542	484	374

Three semen producing businesses were licensed in the province. Two of the businesses produced bull semen and one produced boar semen. In 1985, the number of licences issued under the Artificial Insemination Act declined over 1984. The number of inseminating businesses and licensed technicians also declined in 1985 (Table 6).

Table 6

	1985	1984	1983	1982
Semen Producing Businesses	3	4	5	5
Inseminating Businesses	43	50	44	50
Technician Licences	96	108	116	126
Technician Training Permits	-	-	-	4
Specific Herd Permits	-	-	4	3

D. Federal-Provincial Beef ROP Program

As of March 31, 1986, 175 herds (9,150 calves and/or cows) had completed the weaning phase of the Federal-Provincial Beef ROP Program. This level of participation represented a decline of about 20 herds from the previous year. It appeared that the major decline occurred in the southern part of the province where the drought conditions caused a number of producers to greatly alter their normal management procedures including performance evaluation.

The Federal-Provincial ROP Program is presently being re-written to run on micro-computers. The question of who will be responsible for data processing has yet to be resolved.

E. Alberta Young Sire Proving Program

The Young Sire Proving Program provided a grant to cover half the total cost of progeny testing of Alberta owned bulls, up to $1,250 per bull. In 1985, only one organization was currently active in the progeny testing field. Grants were provided for 5 bulls for a total of $5,625.

F. Beef ROP Weight Supervision Program

This program provided technicians to supervise the scales used for the home performance test programs. Roughly 28,000 cattle were weighed at a cost of about $31,000. This included both weaning and yearling weights. Eighteen counties took advantage of this program. In several other counties, weights are supervised by extension personnel or are unsupervised.

The difference between the number of cattle weighed and the number enrolled in the Federal-Provincial ROP Program, reflected the support for private programs in the province. These programs are offered by breed associations, at least one district agriculturist office and a number of others which have been developed by producers for personal on-farm use.

G. Bull Test Stations

Interest in testing bulls in a "test station" format continued to grow. Twenty-four groups operated bull test stations this year. Nearly 2,900 bulls were evaluated for growth rate over the 140-day feeding period. This represented an increase of some 30% over previous years activity. All stations received some support from department staff. This support ranged from weight supervision, calculation and distribution of results to general publicity.

The Branch operated test station at Ellerslie again had a very successful year. Two hundred bulls were tested and more than 200 additional bulls were turned away because of a lack of space. The sale at the end of the test saw 64 top performing bulls sold for an average of $1,735.

H. Game Ranching

Interest in game ranching remained high even though regulations to govern this new industry have yet to be introduced.

Eight producers owned elk under a variety of existing game laws. Collectively, these producers owned about 350 elk cows. Demand for breeding stock was high with every available female going into breeding herds.

Bison farming continued to grow. Most existing herds expanded as rapidly as female breeding stock became available. New herds are also being developed.

Fresh bison meat was offered for sale on a trial basis at several retail groceries in Alberta this year. In each case the bison sold very rapidly. The demand, including overseas, was far greater than the existing breeding herds could supply. This suggested that growth in both numbers of herds and size of herds could be continued without decreasing market price.

Our involvement in game ranching has been to offer extension services. Besides answering hundreds of inquiries, a newsletter, the "Game Grower", was started and two issues were produced and mailed to 113 producers. The branch also helped organize the Alberta Game Growers Association and sponsored a field day and tour. A factsheet entitled "Introduction to Bison Management" was produced and given to about 150 producers or interested persons.

I. Warble Control Program

For the second consecutive year, warble infested carcasses represented less than 2% of those slaughtered in Alberta plants during

the period February through May, 1985. Losses due to warbles continued to represent less than 20% of the $3 million estimated in 1980.

The program of warble inspections at packing plants and markets across the province continued to provide information to allow municipal pest control officers to identify potentially infested herds and enforce the warble control regulations of the Agricultural Pests Act. The Department, through the Rural Services Division, paid grants to municipalities to cover 60% of their costs for promoting warble control and enforcing warble control regulations, and 100% of their costs for hiring warble inspectors for auction markets in their local areas.

Warble Control Program Costs

1985	1984	1983	1982	1981
$157,969	$161,159	$149,702	$149,316	$140,143

J. Livestock Production Improvement Program

Agricultural Service Boards are provided with a grant of 60% of their costs for programs which demonstrate and promote improved livestock production practices in their districts. The Rural Services Division provided the grant funds and the projects are reviewed jointly by the Agricultural Services Branch and the Beef Cattle and Sheep Branch. Grants are available for demonstrations, field days, extension programs and for purchase of equipment for loan or rental to livestock producers to encourage adoption of new production practices.

Livestock Production Improvement Grants

1985	1984	1983	1982	1981
$56,068	$42,289	$43,730	$69,911	$26,476

K. Fair Assistance Program

Grants were provided to assist Alberta breeders exhibit their stock at major international class shows outside of the province. Two hundred and ninety-seven exhibitors showed an estimated 1,160 animals in seven international class shows in the 1985-86 show season.

Table 7

Livestock Fair Assistance Program

Grants Paid to Alberta Exhibitors
(Numbers of exhibitors shown in brackets)

Fair	1985-86	1984-85	1983-84	1982-83	1981-82	1980-81
P.N.E.	$22,305 (35)	$30,361 (40)	$34,141 (47)	$30,120 (40)	$36.078 (63)	$29,142 (61)
Royal	12,330 (22)	6,200 (8)	8,290 (14)	12,940 (23)	9,780 (16)	9,300 (16)
Agribition	61,825 (188)	67,765 (203)	62,945 (186)	50,410 (145)	51,845 (132)	50,085 (127)
Denver	19,050 (36)	21,000 (40)	30,700 (52)	18,800 (31)	22,200 (32)	17,200 (15)
National Sheep Show	2,625 (4)	--- ---	2,310 (4)	3,310 (6)	3,685 (8)	--- ---
National Goat Show	3,675 (11)	--- ---	--- ---	--- ---	--- ---	--- ---
U.S.A. National Sheep Show	225 (1)	--- ---	1,000 (1)	--- ---	--- ---	--- ---
	$122,035 (297)	$125,326 (291)	$139,386 (304)	$115,580 (245)	$123,588 (251)	$105,727 (219)

P.N.E. - Pacific National Exhibition, Vancouver

Royal - Toronto Royal Agricultural Winter Fair

Agribition - Canadian Western Agribition, Regina

Denver - National Western Stock Show, Denver

L. Black Fly Abatement

Black fly abatement projects in 1985 included monitoring of adult black fly activities in the livestock herds near the Athabasca River in the Wandering River, Grassland and Athabasca districts. The animal management section staff continued to work with livestock producers and service board staff to develop and demonstrate methods reducing the impact of black fly attack on livestock. Self treatment insecticide oilers were demonstrated with the cooperation of Lac La Biche and Athabasca Service Boards for the second year. Users confirmed that the oilers provided relief from the biting flies and local producers have begun installing their own equipment.

The branch contracted with the County of Athabasca to monitor developing black fly larvae in the Athabasca River and to treat the river with the larvicide methoxychlor when minimum threshold levels were reached in late May and again in early July. In 1985, the Country of Athabasca received $56,998 to reimburse their costs for the larviciding project.

M. Sheep ROP Home Test Program

In 1985, the sheep specialist in Airdrie implemented new procedures for processing records on the sheep R.O.P. home test which allowed for instant turn around time for results. The number of breeders enrolled in the program increased to 60 in October, 1985, and number of lambs increased by 10%. Early 1986 registrations indicated a 50% increase from 1985.

The program allowed producers to evaluate wether, ram and ewe lamb daily gains from birth to 50 days and 100 days of age. Adjustments for

age of ewe, sex, multiple births and foster rearing allow comparisons of performance among lambs and the productivity of their mothers in the form of a ewe index.

Table 8

Enrolment in Sheep R.O.P. Home Test

(lambs recorded on test)

Breed	1985	1984	1983	1982	1981
Suffolk	2514	2079	1432	1929	1913
Hampshire	240	397	421	469	229
N.C. Cheviot	243	358	244	282	327
Rambouillet	487	253	139	217	167
Columbia	281	227	291	177	98
Dorset	196	172	173	99	327
Leister	---	14	---	---	---
Corriedale	---	51	96	30	19
Scottish Blackface	---	---	---	---	20
Finnish Landrace	---	---	281	54	247
Other Purebreds	36	---	47	52	39
Crossbreds	146	249	404	455	995
TOTAL	4143	3900	3528	3754	4381

N. Alberta Ram Test Station

The central test station to record performance for Alberta rams was again operated on the campus of the Olds College in 1985. Thirty-eight breeders entered 202 rams for test.

Rams were entered on test in four groups starting on February 21, 1985 and each two weeks thereafter.

Animals indexing over 100 for average daily gain, and passing a rigorous culling process, were sold at the annual test station sale in July. Sixty-one lambs qualified for sale. This represented 26% of the rams entered on test.

The wool breeds test was conducted at the test station for the second year.

Table 9

1985 Ram Test Station Results

Breed	Number Tested	A.D.G. Kg/Day	Number Sold	Average Price (Ram Lambs)	High Price
Suffolk	141	.534	37	$442	$1350
Hampshire	13	.510	6	$317	$ 500
Dorset	20	.383	5	$387	$ 425
Rambouillet	16	.426	4	$390	$ 420
Polypay	11	.397	3	$517	$ 525
Columbia	5	.450	1	$275	$ 275
Yearlings	25	--	5	$585	$ 775

Table 10

Summary of R.O.P. Ram Test Station Results
1975-1985

Breeders On Program	Rams Entered On Test	A.D.G. (Suffolk Ram Lambs)	Head Sold	Average Price (All Ram Lambs)	Top Price
1975 12	85	.32 Kg.	45	$223	$ 525
1976 7	70	.36 Kg.	43	$231	$ 450
1977 14	165	.36 Kg.	53	$244	$ 500
1978 16	155	.42 Kg.	56	$275	$1050
1979 17	123	.49 Kg.	52	$331	$ 675
1980 17	101	.48 Kg.	44	$323	$ 520
1981 23	102	.48 Kg.	40	$375	$ 775
1982 28	115	.47 Kg.	49	$387	$1100
1983 38	173	.514 Kg.	61	$332	$ 750
1984 37	228	.550 Kg.	72	$384	$1500
1985 38	202	.534 Kg.	61	$421	$1350

O. Feeding Program Advisory Service And Feed Testing

A major service provided by the Animal Nutrition Section involved formulating livestock rations and designing feeding programs for livestock producers. This service was frequently based on information obtained from laboratory nutrient analysis of feedstuffs. Analyses from private laboratories were provided by farmers occasionally, but the service functioned largely in conjunction with analyses obtained from the Agricultural Soil and Feed Testing Laboratory (A.S.F.T.L.).

Total Samples Analysed

The total number of samples declined for the second consecutive year to 17,273 for 1985-86. This was down almost 2,000 samples (10.2%) from 1984-85 but still above the six year average of 14,136 (Table 11).

Table 11

Comparison Between The Number Of Samples Received In 1985 And 1984 Fiscal Years And The Average Number Received In 1979 To 1985 Fiscal

Period	Years Regular	Demonstration	Research	Total
1985-86	3,566	2,295	11,412	17,273
1984-85	3,756	2,637	12,833	19,226
Average 1979-85	3,976	2,192	7,968	14,136

In 1985-86, research, demonstration and regular or fee samples decreased 11.1%, 13.0% and 51.0%, respectively, over 1984-85. In comparison, the number of feed samples analysed by private laboratories increased from 19,700 to approximately 24,000 for a similar period. It appeared that the use of feed testing services by livestock producers has not decreased but that a shift from the use of government to private laboratories took place. Regular samples constituted 21%, demonstration samples 13% and research samples 66% of the total. These proportions have changed very little over the last five years (Table 12). Research samples were submitted by University of Alberta and Agriculture Canada staff engaged in research projects deemed to be of direct benefit to the livestock producers of Alberta. Demonstration samples were those samples submitted by department staff for diagnostic purposes or to demonstrate the value of feed testing to producers. Regular samples represented the bulk of submissions by producers.

Table 12

Number of Samples Submitted Broken Down by Sample Category For the Past Five Fiscal Years

Sample Category	1981-82	1982-83	1983-84	1984-85	1985-86
Regular	3,219(33)*	3,833(26)	4,322(20)	3,756(19)	3,566(21)
Demonstration	2,137(22)	1,994(14)	2,274(11)	2,637(14)	2,295(13)
Research	4,337(45)	8,630(60)	14,426(69)	12,833(67)	11,412(66)
Total	9,693	14,457	21,022	19,226	17,273

* Numbers in parenthesis are percent of total samples within fiscal year.

Types Of Analyses Conducted

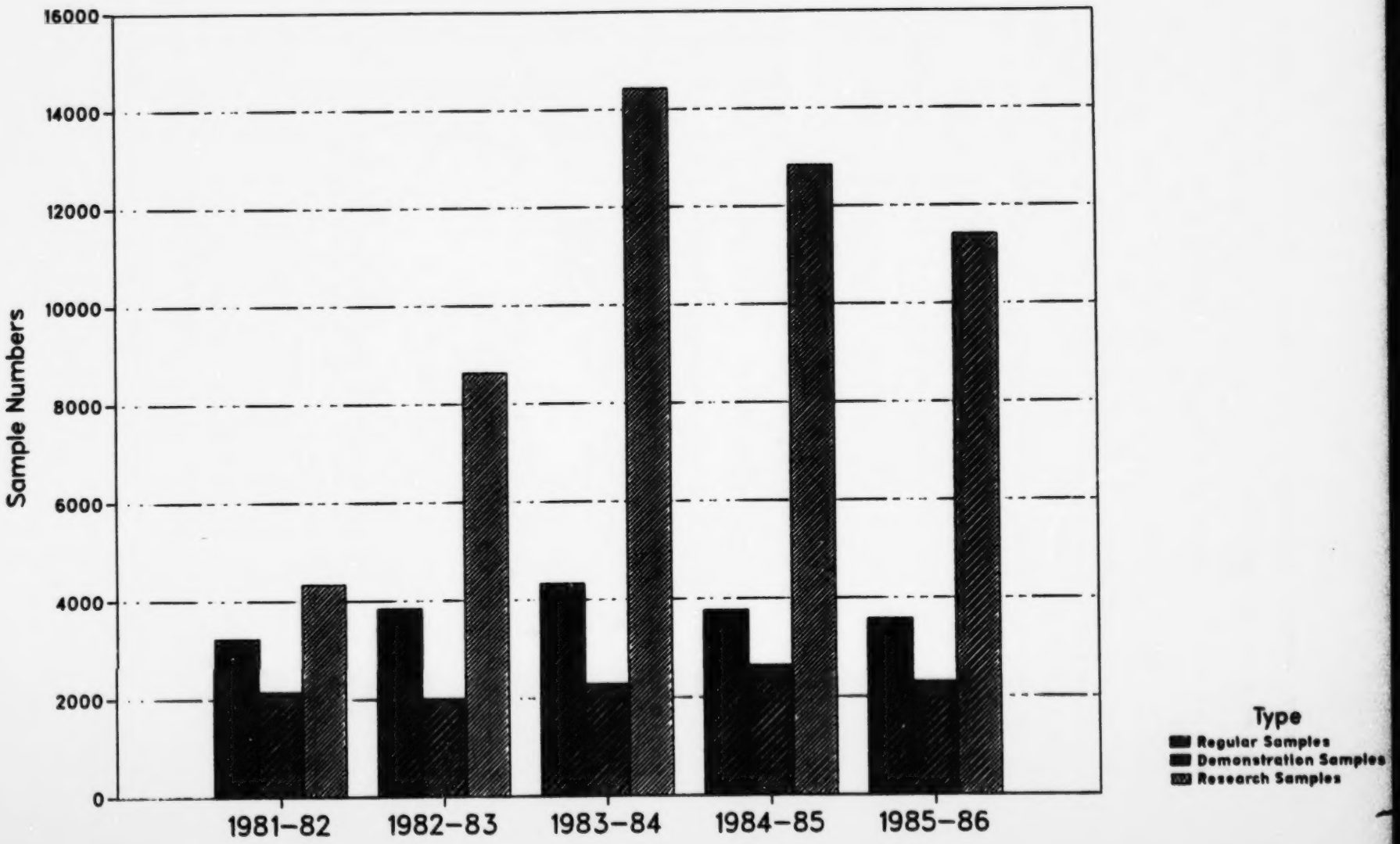
The A.S.F.T.L. offered a variety of nutrient and element analyses. A package (also called a regular) analysis of roughages and silages consisted of moisture, calcium, phosphorus, acid detergent fibre, nitrates and pH (silages only). A package analysis of grains consisted of moisture, crude protein, calcium, phosphorus and bushel weight (whole grains only). The types of analyses performed was identified by sample submission type (Table 13).

Table 13

Distribution Of Chemical Analyses Of Alberta Feedstuffs By Sample Submission - 1985-86 Fiscal Year

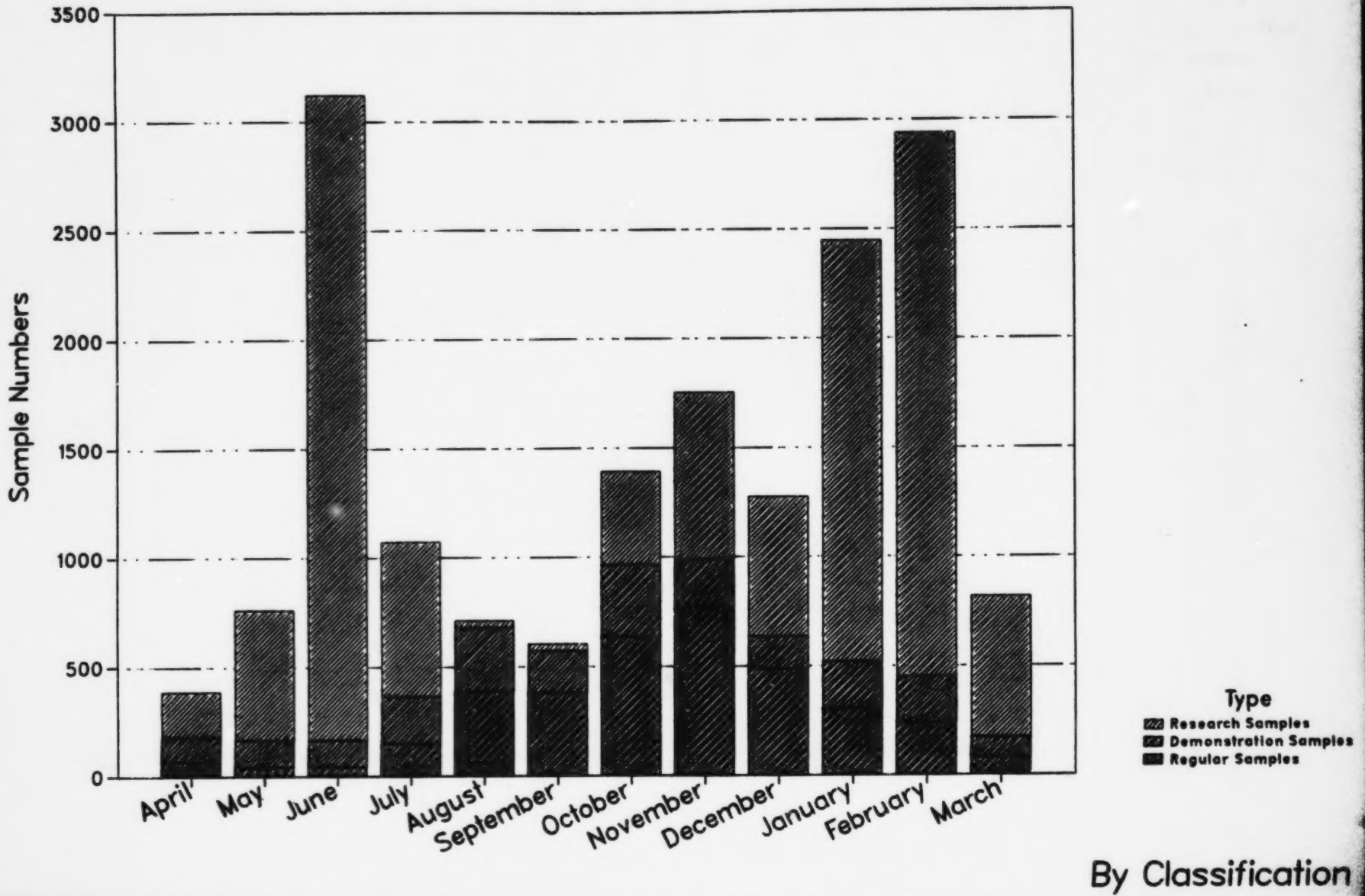
Analysis	Regular (%)	Demonstration %	Research %	Total Number Of Analyses
Package (regular)*	21	13	66	17,273
Carotene	66	34	-	242
Fat	2	29	70	347
Selenium	37	36	27	1,758
Salt	3	71	26	191
Ash	1	17	82	674
Copper	14	33	53	2,132

GRAPH 1 Sample Submission Classification (Past Five Fiscal Years)



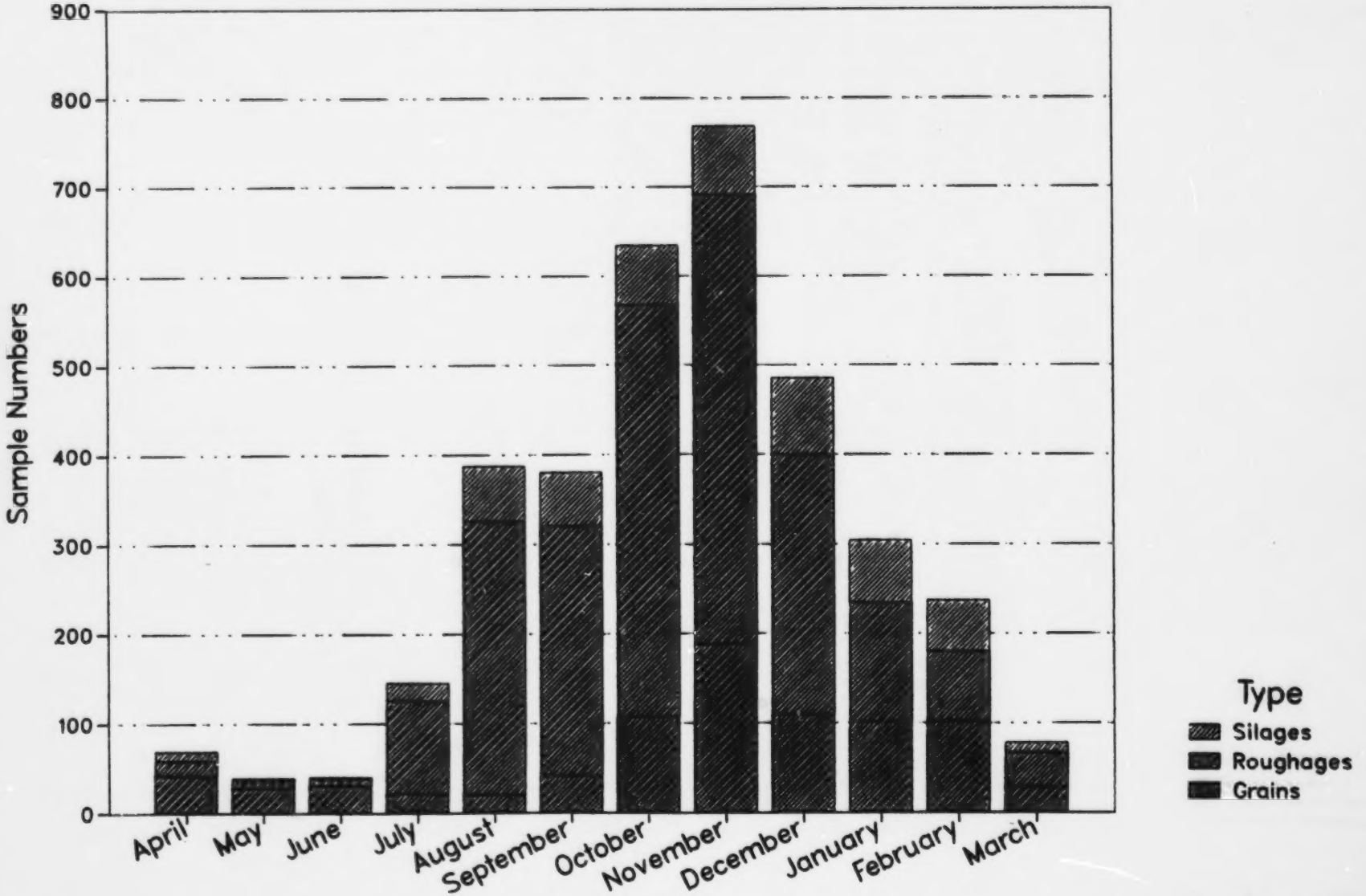
By Type

GRAPH 2 Distribution of Samples (1985–86) By Month and Classification



By Classification

GRAPH 3 Distribution of Samples (1985–86) By Month and Feed Type



By Feed Type

Table 13 (Continued)
Distribution Of Chemical Analyses Of Alberta Feedstuffs By Sample Submission - 1985-86 Fiscal Year

Analysis	Regular (%)	Demonstration %	Research %	Total Number Of Analyses
Manganese	14	32	54	2,087
Zinc	14	33	53	2,139
Iron	12	29	59	1,879
Magnesium	17	24	59	2,378
Potassium	13	25	62	2,264
Sodium	9	20	71	1,346
Aluminum	1	8	91	1,024
Molybdenum	11	22	67	1,403
Sulphur	10	13	77	1,805
Cadmium	13	87	-	31
A.D.I.N.	29	29	42	290
Prussic Acid	40	60	-	5
Boron	11	25	70	1,472
Nickel	-	3	97	964
Cobalt	2	7	91	1,021
N.D.F.	-	8	92	813
Lignin	-	8	92	838
Chloride	-	-	100	208

* Package analysis includes moisture, protein, calcium, phosphorus, acid detergent fibre and nitrates on roughages and silages and pH on silages and moisture, bushel weight, protein, calcium and phosphorus on grain samples.

The types of analyses performed was also identified by fiscal year (Table 14). Trace mineral analysis was of major interest with copper, manganese, zinc and selenium being the most often requested. Requests for trace mineral analysis has increased approximately 50% from the 1984-85 and fiscal year. Requests for magnesium, potassium and sulphur analysis increased over 100%. Analysis requests increased 70% for acid detergent insoluble nitrogen (A.D.I.N.), 122% for fat and 700% for lignin. These increases suggested that producers, extension workers and researchers are demanding more feed evaluation information.

Table 14

The Number And Types Of Chemical Analyses On Alberta Feedstuffs Over The Past Five Fiscal Years

Analysis Performed	Fiscal Years 1981-82	1982-83	1983-84	1984-85	1985-86
Package (regular)*	9,693	12,455	20,395	19,226	17,273
Carotene	815	306	380	273	242
Fat	178	89	144	166	347
Selenium	1,825	1,811	1,863	1,687	1,758
Salt	97	90	78	106	191
Ash	565	1,027	2,118	1,022	674
Copper	1,333	2,116	1,804	1,587	2,132
Manganese	1,224	1,744	1,802	1,456	2,087
Zinc	1,274	2,041	1,805	1,601	2,139
Iron	851	1,290	649	707	1,879
Magnesium	1,310	1,569	1,408	1,173	2,378
Potassium	1,290	1,638	1,144	1,121	2,264
Sodium	857	1,153	325	556	1,346
Aluminum	1,038	1,229	234	369	1,024
Molybdenum	1,017	1,428	380	402	1,403
Sulphur	832	1,376	731	1,018	1,805
Cadmium	820	1,060	103	75	31
A.D.I.N.	202	148	100	186	290
Prussic Acid	7	5	4	3	5
Boron	912	1,116	223	522	1,472
Nickel	724	961	-	115	964
Cobalt	724	1,379	238	9	1,021
N.D.F.	514	1,014	878	952	813
Lignin	472	120	70	108	838

* Package analysis includes moisture, protein, calcium, phosphorus, acid detergent fibre and nitrates on roughages and silages and pH on silages and moisture, bushel weight, protein, calcium and phosphorus on grain samples.

Of the 11,412 research samples analysed in 1985-86, 5,610 or 49% were analysed using near infrared reflectance spectroscopy (NIR). This was down substantially from 1984-85 when 8,288 samples were analysed by NIR. This was due mainly to instrumentation breakdown and was not a reflection of decreased interest in NIR analyses. NIR was not used for regular or demonstration samples in 1985-86.

Several requests for specific analyses were not met due to lack of proper instrumentation. This included requests for amino acid analyses on grain and mixed feeds for poultry and swine, and vitamin assays on many different types of feeds. The presence of a high pressure liquid chromatography (HPLC) instrument would have provided this capability.

Table 15

Number Of Feeding Program* Requests On Regular Reports Printed For The Past Five Fiscal Years

	1981-82	1982-83	1983-84	1984-85	1985-86
Number of Regular Reports	1535	1733	1618	1753	1750
Species			Feeding Programs		
Beef	96	156	166	163	140
Dairy	48	54	54	36	14
Swine	57	88	67	44	33
Sheep	10	8	14	11	5
Horses	16	21	32	21	11
Poultry	9	2	4	4	3
Others	7	12	4	1	-
Total	243	341	341	280	206
Feeding programs as a percent of regular reports (%)	15.8	19.7	21.1	16.0	11.8

* A feeding program usually involves several specific ration recommendations.

Feeding Program Recommendations

General recommendations and comments on nutritional quality were included with the analytical results of each feed test report. In 1985-86, 1,750 regular (Table 15) and 882 demonstration (Table 16) reports were printed. Feeding programs were developed for 206 of the

regular and 32 of the demonstration reports. These levels are down 26% for regular and 45% for demonstration reports from 1984-85.

Table 16

Number Of Feeding Program Requests On Demonstration Reports Printed For The Past Five Years

	1981-82	1982-83	1983-84	1984-85	1985-86
Number of Demonstration Reports	1375	650	792	965	882
Species			Feeding Programs		
Beef	48	28	30	20	6
Dairy	40	15	19	13	9
Swine	23	15	21	12	6
Sheep	-	3	7	3	1
Horses	8	-	5	6	6
Poultry	5	2	3	3	3
Others	3	8	1	1	1
Total	127	71	86	58	32
Feeding program as a percent of demonstration reports (%)	9.2	10.9	10.9	6.0	3.6

The requests for feeding programs usually entailed ration recommendations for more than one class of animal and level of production. Several rations and alternatives were usually developed for each request. In addition to the number of feeding program requests indicated in Tables 15 and 16, a number of recommendations were made after the reports were mailed. Also, an increased number of feeding program recommendations were made based on test results obtained from private laboratories. Thirdly, many recommendations were made without the benefit of feed test results. These three types of recommendations were not included in the above totals.

Regional livestock supervisors conducted an increased number of ration balancing meetings with their clients. This was in part due to the feed shortage but should be encouraged every year as ration balancing "with" the client rather than "for" client has many advantages. Direct communication of the clients needs and capabilities, on farm assessment of livestock condition and visual appraisal of feed quality and supply are the major benefits. However, ration balancing and feeding program development require specialized expertise that demands the continued involvement of nutrition staff.

P. Artificial Insemination (A.I.) Data Program

The A.I. Data Program introduced in 1980 continued with a grant of $1.00 for each insemination reported by a licensed inseminating business. A total of $17,396 was paid to 23 participating businesses during the year. This program provided an accurate record of all inseminations carried out by licensed technicians with a breakdown by herd, insemination business, breed and name of sire and an estimated non-return rate. A statistical summary of the number of cows bred by artificial insemination by year and breed of sire follows:

Table 17

Breed of sire	Number of Cows			
	1982-83	1983-84	1984-85	1985-86
Ayrshire	538	278	336	274
Brown Swiss	340	246	315	237
Gernsey	221	171	94	76
Holstein (B&W)	13958	9192	8967	-
Holstein (Red)	131	135	148	-
Holstein-Friesian	-	-	-	9271
Jersey	786	672	608	597
Red Poll	6	4	1	-
Dual Purpose Shorthorn	35	29	16	-
Other	-	-	-	40
Total Dairy	16015	10727	10485	10495

Table 17 (Continued)

Breed of sire	Number of Cows 1982-83	1983-84	1984-85	1985-86
Aberdeen Angus (Black)	1191	1425	1197	1190
Aberdeen Angus (Red)	330	395	437	507
Ankina	-	3	50	-
Beefalo	3	2	1	-
Blonde d'Aquitaine	164	17	14	15
Braham	21	123	51	-
Brangus	-	20	-	-
Brown Swiss (Beef)	4	-	-	-
Charolais	1036	973	1014	489
Chianina	97	72	61	-
Galloway (Belted)	-	2	-	-
Galloway	-	4	16	-
Gelbvieh	44	102	114	265
Hays Converter	5	8	1	4
Hereford	-	-	-	1885
Hereford (Horned)	1499	1226	1011	-
Hereford (Polled)	1679	1375	989	-
Highland	9	7	-	-
Limousin	517	439	360	525
Luing	-	-	2	-
Marchigiana	1	4	6	-
Maine Anjou	184	142	60	69
Meuse-Rhine-Ijssel	5	2	2	-
Mexican Corriente	10	1	5	-
Murray Grey	95	42	34	17
Normande	3	3	1	-
Pinzgauer	66	42	78	28
Piedmont	2	-	-	-
Romangnola	11	1	6	-
Salers	325	1	541	373
Santa Gertraudis	-	3	5	-
Shorthorn	38	24	62	70
Shorthorn (Polled)	60	68	24	-
Simbrah	-	-	43	-
Simmental	1826	1463	1336	930
South Devon	7	13	1	-
Tarentaise	26	76	133	-
Tasmanian Greg	-	-	2	-
Texas Longhorn	25	28	32	-
Wasusi	-	2	-	-
Welsh Black	2	-	2	-
Crossbred	-	-	14	-
Other	-	-	-	534
TOTAL	6901	7705	8108	9285
GRAND TOTAL	17396	18190	18835	25300

III. RESEARCH AND DEVELOPMENT

The branch's active involvement in research and development continued in the past year. Most projects were a cooperative effort among producers, and others outside the branch. Some of the project titles which follow were identified in the 1984-85 report. In these cases the project spanned two fiscal years. The following is a listing of projects in which branch staff were involved:

A. Growth Implants

1. The effect of repeated Ralgro implanting on growth performance and carcass characteristics of bulls from weaning to slaughter.
2. A comparison of weight gain in yearling steers at feedlot and calves at pasture not implanted or implanted with Ralgro, Synovex or Compudose.
3. The effect of double dose Ralgro implants on steer gains in feedlot.

B. Reproduction

4. The influence of energy level on conception rate of sows inseminated with fresh or frozen semen using two methods of heat detection.
5. A comparison of the fertility of frozen semen, fresh semen and natural service in 3 swine herds.
6. Value of spayed heifers under feedlot conditions.
7. Using artificial heat synchronization for controlled breeding.

C. Disease Control

8. The effect of treatment for sickness and time of treatment for sickness on subsequent yearling gains at feedlot.
9. An estimate of the production loss and costs associated with the occurrence of pinkeye, footrot and pneumonia on the pembina forage association pasture.
10. Field trials examining the efficacy of Precon PH vaccine.

D. Nutrition and Management

11. Effects of barley volume - weight and processing method on feedlot performance of finishing steers.
12. The effect of energy intake level on growth performance and feed efficiency of horses at feedlot.
13. Growth performance and feed efficiency of yearling steers fed a barley or a triticale based ration at feedlot.
14. Canola meal as an alternative protein supplement for use in swine rations.
15. The reproductive performance of sows, fed a canola or a soya-based ration over four parities.
16. The effect of rumensin and bovatec on animal performance and feed efficiency.
17. Factors affecting level of protein, calcium and phosphorus in pig rations mixed on farm.
18. Continued activity with the University of Alberta on evaluating the intake and digestibility of forages and predicting the feeding value of forages.

19. Continued work with A.S.F.T.L. to evaluate the efficiency of near infrared reflectance analysis as a method of predicting intake and digestibility of forages by ruminants.
20. Conducted a study with A.S.F.T.L. on methods of determining acid detergent fibre and acid detergent insoluble nitrogen in dry grain, high moisture grain and grain silage.
21. Concluded on-farm project to evaluate canola versus soybean meal in dairy rations.
22. Concluded study on on-farm mixing of swine rations.
23. Conducted a study of the chemical composition of canola meal from seven western Canadian crushing plants.
24. Conducted a study into forage sampling techniques with the Horse Industry Branch.

E. Others

25. Concluded study of nutritive value of hulless barley for swine.
26. Evaluation of technician and site differences in backfat thickness in pigs.
27. The relationship between age, body weight, scrotal circumference and backfat of bulls at the Ellerslie and Raymond Bull Test Stations in 1984.
28. Factors affecting milk volume determinations on farm.
29. The effect of seeding rate on faba bean yield.
30. Effects of birth type, age of dam, entry weight and prestation gain on test station results of ram lambs.

31. Comparison of a cross fill indexing and within fill indexing for the National ROP Ram Test Stations (1975 to 1984).

32. Examining the linearity of ram growth from station entry to end of test for the National ROP Ram Test Stations (1975 to 1984).

33. Effect of breed of sire, sex of lamb and type of birth and rearing on lamb weight gain from birth to slaughter.

IV. TECHNOLOGY TRANSFER

Branch staff were involved in enhancing the process of incorporating existing husbandry practices on farms through their extension activities. Producer meetings, personal correspondence and contacts, mass media releases, newsletters, factsheets and on-farm demonstrations were used to distribute livestock information to primary producers, industry, the general public and other government agencies. Technology transfer continued to be the major activity of branch staff.

A. Workshops, Extension Meetings and Field Days

The branch organized and participated in numerous conferences, seminars, meetings, workshops and field days. The branch organized and/or participated as speakers in major events such as the Managing Agricultural Technology for Profit, Alberta Dairy Seminar, Alberta Pork Congress, Alberta Pork Industry Workshop, Feed Industry Conference, and the Alberta Sheep Symposium. The branch staff also spoke at many local extension meetings which were organized by regional and district staff on all aspects of livestock husbandry. Staff also spoke at several meetings organized by industry and agribusiness.

Several one-day or series workshops were organized by the branch. In-service training workshops on livestock pest control, livestock production technology and livestock nutrition were conducted for agricultural fieldmen, district agriculturists and other department staff.

Workshops, seminars and clinics were also organized for producers, 4-H clubs, industry and agribusiness representatives. Topics included in these events were condition scoring, animal nutrition, livestock judging, beef management, cow and cow-calf management, growth implants and feed additives, sheep shearing and sheep management.

B. Mass Media Presentations

During the past year, branch staff were active in preparing news releases and information articles on various beef and sheep production topics for radio and popular press. At least twenty-four articles were prepared for the department's Agri-News, and 20 items for the radio program, Call-of-the-Land. Several articles were prepared for newspapers and trade magazines.

The branch prepared three producer newsletters on a regular basis last year. These were Sheep Notes and News, Sheep Footnotes, and Game Grower.

C. Requests For Service

The major component of the branch's extension effort continued to involve responding to individual requests from producers, department staff, other government departments, municipalities, Agriculture Canada, University of Alberta, veterinarians, private consultants and agribusiness.

Requests ranged from specific to general in nature and included all topics related to domestic and semi-domestic livestock production.

V. STAFF DEVELOPMENT

Branch staff attended a number of workshops, seminars, courses and professional society meetings during the year. The purpose was to improve personal, professional and managerial skills and to keep abreast of new subject matter developments in the areas of livestock production.

VI. STAFF CHANGES

April, 1985	Don Scheer, Head, Animal Nutrition, promoted
June, 1985	Debbie Forge, Clerk Typist III, resigned.
July, 1985	Janet Smalley, Clerk Typist III, transferred.
	Don Scheer, seconded to the Alberta Feed Grain Market Adjustment Program.
August, 1985	Phyllis Day, On-Line Data Processing Operator, hired.
September, 1985	Cathy Gallivan, Sheep and Goat Specialist, hired.
	Shirley Sommert-Ogden, Clerk Typist III, hired.
	Ernie Maynard, Head, Animal Reproduction, resigned.
October, 1985	Al McNeil, Ruminant Nutritionist, hired on temporary salary position.
January, 1986	Phyllis Day, On-Line Data Processing Operator, resigned.
	Barry Callaghan, Reproductive Physiologist, resigned.

HORSE INDUSTRY BRANCH

Industry Overview

Interest in horse-related sport and recreational activities remains strong despite decreases in mares being bred and sale prices. High levels of participation are reported for activities such as attendance at racetracks, showing, rodeos, trail riding, 4-H, pony club, gymkhana and pleasure riding. However, fewer new people are becoming involved and current horse owners are not replacing their horses.

Select Breed Sales

	1982	1983	1984	1985
Thoroughbred Yearling	9,752	6,054	5,707	6,823
Standardbred Yearling	7,674	5,627	2,292	1,845
Quarter Horse	3,020	2,598	1,497	1,202

During 1985, the horse breeders were severely affected by drought and subsequent high pay costs. Leaders in the horse industry were appreciative of being included in major provincial government support programs, namely Livestock Drought Assistance, Livestock Assistance and Feed Grain Market Adjustment.

In excess of 20 million pounds of horsemeat is processed in three Alberta plants. The product is shipped to Europe and Japan by air in fresh or frozen form for human consumption. During the past year, plant capacity in Alberta was expanded and prices for live horses increased to 30¢ to 40¢ per pound. Because only two companies buy and sell horsemeat in Alberta, statistical information is not published.

Considerable public concern is developing towards the humane transportation and treatment of horses for slaughter.

Education/Advisory Services

The branch, with a permanent staff of three professionals, provides educational and advisory services to horse owners in all areas of the province. The branch has a large and varied clientele which can be divided into primary producers who raise and market horses and horse owners who purchase and use horses for sport and recreation. Although priority is given to the breeding industry, considerable effort is given to providing all horse owners with information on general care and management of horses, as a large percentage of these people have limited background with livestock.

Extension programs consisted of conducting or supporting approximately 40 short courses throughout the province, as well as providing speakers for programs conducted by colleges and organizations.

The branch prepared technical articles and bulletins for distribution and staff was available as resource people for colleges, veterinarians, district agriculturists, private and public loans officers and other Alberta Agriculture staff relative to horses and the horse industry.

During 1985, the branch contracted the production of a film on "Alberta Breeds for the World". A general film describing the various breeds of horses in Alberta was made for use in schools and during trade fairs.

Another highlight was the Alberta Breeders Conference that was conducted in cooperation with four participating breed associations. Over 200 people registered for the program which included 15 highly qualified speakers.

Of special interest from a technical aspect, branch staff coordinated a project to freeze stallion semen. The project was conducted on a breeder's farm with help from a private veterinarian.

Horse Improvement Program

The Horse Improvement Program is an annual breeder's show designed to identify and recognize superior horses, breeders and trainers in Alberta. A committee consisting of representatives from participating breeds assists with the planning.

In 1985, 50 classes were available for the 14 participating breeds resulting in 666 horses being evaluated. Results are computerized allowing for breeders to use the program to assist them in making selection and mating decisions. In some breeds, these are the only performance and production records available.

Summary of Horse Improvement Program Entries

	1982	1983	1984	1985
American Saddlebred	6	13	15	15
Arabian	34	98	81	79
Appaloosa	60	65	73	62
Belgian	22	19	31	31
Clydesdale	22	15	27	25
Hunter	31	26	35	25
Morgan	18	27	16	37
Pain	19	23	23	29
Part-bred Arabian	17	24	24	20
Percheron	25	16	21	27
Pinto	23	26	22	32
Quarter Horse	90	71	109	99
Walkers	10	11	17	16
Welsh Pony	27	21	18	15
Total Entries	404	455	534	512
Total Horses	552	603	704	666

The draft horse section of the program was held during the Calgary Stampede and the light horse section was held during the last two weekends in September at the new Red Deer Westerner facility. The move from Spruce Meadows was made to accommodate breeders from the northern part of the province and to expand from one weekend to two.

Travel Assistance

Travel assistance is available to Alberta breeders who have horses that qualify for and participate in recognized breed sponsored national or international championship competitions held outside Alberta. During 1985, travel assistance of $12,450 was paid on behalf of 31 horses representing 5 breeds.

Travel Assistance Participation

	1982	1983	1984	1985
Canadian Arabian Championship	N/A	6	N/A	3
Canadian National Appaloosa	49	6	18	N/A
U.S. Arabian Championship	1	4	3	10
U.S. Appaloosa Championship	-	-	-	-
Quarter Horse World Championship	11	7	7	12
U.S. Morgan Horse Championship	1	-	-	2
Connemara International Show	2	-	-	-
U.S. National Peruvian Pasa Show	1	5	6	4
U.S. National Clydesdale Show	7	-	-	-

Stallion Fertility Valuation

Horse breeders can, through a referral by a veterinarian, have a fertility evaluation of stallions conducted by the branch in cooperation with Olds College. In 1985, 17 stallions were tested.

Market Development Assistance

The branch assists in administering Market Development grants of up to $25,000 for provincial horse breed associations.

During 1985-86, 10 breed associations were provided grants totalling $82,513. Projects supported include establishing breeders sales, printing brochures, incentives for successful Alberta-bred horses, provincial futurities, participation at trade fairs and general promotion and advertising.

In cooperation with Market Development and Agri-food, branch staff coordinated the participation of 15 Alberta breeds in a trade fair held at Spruce Meadows during the "Masters" horse show. The project involved a large horse exhibit, seminars and demonstrations.

During 1985, branch staff coordinated the participation of Alberta Appaloosas, Quarter Horses and Morgans in Equitana, an international trade fair in Essen, West Germany. The market for western horses from Alberta is increasing throughout Europe as many riders desire horses that are different and easy to ride and handle.

Medication Control

As a service to provincial organizations, the branch conducts drug testing at main horse shows. During 1985, 390 horses were tested during 31 days of testing. One positive test for forbidden products was detected, resulting in disciplinary action being taken by the American Quarter Horse Association.

Summary of Testing

	1982	1983	1984	1985
No. of shows tested	16	20	17	21
No. of days tested	28	31	31	31
No. of horses tested	341	268	390	390
No. of blood samples	96	60	98	93
No. of urine samples	236	196	283	288
No. of positive tests	0	1	2	1

Research

The branch conducted a horse nutrition research project at Lakeside Research in Brooks in which the growth rate of young horses related to energy intake was evaluated as well as feed conversations. Equine research in the areas of reproduction, nutrition and health care was supported at the Western College of Veterinary Medicine.

Branch staff presented three research papers during the International Equine Nutrition and Physiology Symposium at East Lansing, Michigan.

PORK INDUSTRY BRANCH

The 1985 farm cash receipts from sale of hogs in Alberta were estimated as 253 million dollars, down 6 million from 1984. Total production of pigs for slaughter in Alberta rose by 13.2% from 1984, and the annual average prices fell to $65.34 in Edmonton from $68.67 in 1984. As a percentage of total farm cash receipts, income from hogs rose from 6.5 % in 1984 to 6.6 % in 1985 in Alberta. Net exports of pork for Canada rose by 9% compared to 1984. For Canada, 437 million pounds of pork were exported (after deducting imports) and 1,013,000 live pigs were exported. This is about 34% of Canada's total production, compared to 25% in 1984. Live hog exports from Alberta were estimated as 277,000 or 14.7% of production. Most of Canada's pork exports and almost all of the live hog exports go to the U.S. Because of health restrictions, few live hogs are imported into Canada.

The number of active hog producers in Alberta in 1985 was 6,200. The number of hogs marketed in 1985 were 2,031,522, an average of 327 per producer. On January 1, 1985, the Alberta breeding herd was reported to be 157,500 and on January 1, 1986, it was reported to be 150,000. Total pigs on farms January 1, 1986 was reported as 1,460,000, 4.0% below the year previous.

Alberta's share of Canada's hog production was 14.1% in 1985 as compared to 13.5% in 1984. This is the third consecutive year that Alberta's share of Canada's production increased.

Hog prices were some $3.33 per cwt above that of the year previous on the average and ranged from $62.35 to $71.94 in 1985 as weekly averages. The range in weekly averages was $9.59 in 1985 compared to $17.04 in 1984. The Alberta average price in 1985 was $3.17 below that of Toronto, and in 1984 this spread was $3.96 per cwt.

Conflict and problems were present in Alberta's swine industry this year. Conflict occurred between the marketing board owned plant and the only other packing plant in Alberta. Advertising campaigns and public conflict did little to help the industry. The U.S International Trade Commission lifted interim countervailing duties on pork but increased the duty on imported Canadian hogs to $0.0439 per lb. live. The increase in slaughter capacity of the board owned packing plant alleviated this price depression by allowing live exports to be minimized.

Work was begun on a national price stabilization program for red meats, including pork. An agreement was signed by Alberta on January 22, 1986 to enter this program. Alberta supplied support its producers in 1985 prior to this agreement in the form of the Red Meat Interim Insurance Payment, at a level which would have been supplied under the support formulas of the National Tripartite Price Stabilization Scheme for hog producers. This interim program supplied payments of $12.4 million to Alberta's producers, of which $3.3 million was federal money.

Steady growth of the Swine A.I. Program continued in the 1985-86 fiscal year with a 10.5% increase in sale of fresh semen over the previous fiscal year to nearly the same number of customers. Table I has a detailed breakdown of sales. A total of 229 doses of frozen semen were sold for export through the Alberta Swine Breeder's Association and directly to Canadian customers.

Reproductive performance with fresh semen continued to compare satisfactorily with results from other A.I. centres in Canada and around the world. Farrowing rates for 1985 averaged 76.2% and litter sizes averaged 10.2 piglets born live per litter.

During the past 12 months, 16 boars were removed from service for a variety of reasons ranging from loss of physical soundness, and insufficient semen quality, to insufficient quality of progeny. Eleven new boars were purchased. Five of these were acquired through Agriculture Canada's Sire Loan Policy. The year end inventory consisted of seven Yorkshire, four Landrace, two Lacombe, four Hampshire and three Duroc boars.

A principal focus of attention during the fiscal year was the planning and construction of a major expansion of the Alberta Swine A.I. facility. Construction was complete at year end on a 20 pen addition to the main boar barn which doubled the size of the boar battery. A new six pen isolation barn and a double garage were also added.

The manager of the Swine A.I. Centre attended the first major international conference devoted to the problems associated with cryopreservation of boar semen. The conference affirmed the need for considerably more research before much hope of any major breakthrough to improve results from commercial use of frozen semen for breeding sows can be expected. The Alberta Swine Breeding Centre completed three research projects dealing with the use of frozen boar semen during 1986. Results confirmed that equal reproductive performance can be realized with semen processed in our lab compared with results being reported by any other laboratories that freeze boar semen. Farrowing results with frozen semen averaged 57% of sows bred. Inseminations are performed on normal, healthy sows at 24 hours after the beginning of standing heat. It was found that heat detection must be done every 12 hours to achieve this level of success. An average of 7.4 live piglets were born in 152 litters from frozen semen.

The Swine A.I. Advisory Committee met once during the year to address the need to update our semen pricing schedule and to update our boar selection policy in concert with new Estimated Breeding Values being reported by the Canadian Federal-Provincial Swine Improvement Program. The advisory committee recognized the need for more input into sales, promotion, customer education and follow-up on the farm. In this regard, a recommendation was made that an additional position be created to strengthen this aspect of the program. Demand for more information is expected to increase significantly as the program expands with more sales and more boars in production.

Three staff members completed introductory IMB PC computer short courses and are currently putting swine A.I. data into a newly acquired microcomputer. Progress is being made to design and write software programs for performing all invoicing functions on site, and doing data analysis and correlations to assist in the management of the A.I. program.

TABLE I

Semen Sales Distribution April 1, 1985 to March 31, 1986

	TOTAL PRODUCERS USING A.I.	# DOSES PURCHASED	# USERS	1-25 DOSES	# USERS	26-50 DOSES	# USERS	51-100 DOSES	# USERS	100 + DOSES
B.C.	60	1805	47	374	6	227	3	279	5	925
ALBERTA	187	3346	145	951	27	935	10	722	5	738
SASK.	17	253	15	130	1	48	1	75	0	0
MANITOBA	25	285	23	196	1	30	1	59	0	0
ONTARIO	1	1	1	1	0	0	0	0	0	0
YUKON	1	1	1	1	0	0	0	0	0	0
NOVA SCOTIA	1	1	1	1	0	0	0	0	0	0
NFDL.	1	14	1	14	0	0	0	0	0	0
TOTAL	293	5706	234	1668	35	1204	15	1135	9	1663
1984-85	290	5164	227	1674	35	1166	23	1255	5	1069

The Swine Record of Performance (ROP) Program served 84 hog producers directly by testing 18,115 potential breeding animals on farms. In addition, 794 boars were tested in the two Alberta test stations at Leduc and Lacombe owned and operated by Agriculture Canada. The total number tested, 18,909, is a slight reduction (less than 1%) from the previous year partially because there were ten fewer users on the program and the federal government also doubled their testing fees for boars at the stations.

The main thrust of the program continues to be the identification of leaner and faster growing breeding stock for the commercial hog industry. In addition, a computerized sow productivity program was made available to program users with about ten herds participating. The federal government published the first issue of Estimated Breeding Values for sires and dams (E3V's) and Herd Activity Monitors (HAM's). This is a statistical technique to separate the genetic from the environmental influences in an animal's or herd's performance traits. This technique will be expanded in future years to enable technicians to calculate EBV's on farms to make them current.

Halothane testing has continued for genetic stress susceptible boars at the test stations. Out of 794 boars entering the stations, nine reacted positively to the test. Littermates were castrated as well as those not dying from the reaction. Sire evaluations were completed on 21 new sires, 19 sire records were updated and partial information was collected on 73 others.

The Alberta Swine Breeders Association (ASBA) sponsored monthly sales of all boars performing above average that were physically sound. A total of 186 boars were sold for a total price of $82,415. In addition, ASBA sold two export orders of 21 and 20 head to Japan for a total price of $28,435.

TABLE II

ALBERTA SWINE R.O.P. TESTING SUMMARY
1981 - 1985

Boars Station Tested	1981	1982	1983	1984	1985
Number	732	872	780	872	794
Avg. Backfat thickness (mm)	16.6	15.3	15.2	14.0	14.5
Avg. daily gain (kg)	0.91	0.92	0.93	0.91	0.92
Avg. feed conversion	2.47	2.43	2.46	2.45	2.41
Avg. age to 90 kg. (days)	149	147	148	144	145
Boars Home Tested					
Number	4,201	4,750	5,851	6,164	5,641
Avg. backfat thickness (mm)	14.4	13.9	13.9	14.1	14.3
Avg. age to 90 kg. (days)	166	162	159	157	157
TOTAL BOARS TESTED	4,933	5,622	6,631	7,036	6,435
Gilts Home Tested					
Number	9,778	10,990	11,809	12,004	12,474
Avg. backfat thickness (mm)	15.8	15.2	14.8	15.4	15.6
Avg. age to 90 kg. (days)	174	172	167	171	169
TOTAL PIGS TESTED	14,711	16,612	18,440	19,040	18,909

TABLE III

BOARS HOME TESTED - 1975 - 1985

YEAR	NUMBER TESTED	AVERAGE BACKFAT (mm)	AVERAGE AGE AT 90 KG. (days)
1975	1,267	17.3	171
1976	1,305	16.5	166
1977	1,965	15.8	163
1978	2,676	15.4	167
1979	3,937	15.0	172
1980	4,207	14.6	171
1981	4,201	14.4	166
1982	4,750	13.9	162
1983	5,851	13.9	159
1984	6,164	14.1	157
1985	5,641	14.3	157

GILTS HOME TESTED - 1975 - 1985

1975	2,411	18.5	179
1976	3,159	17.8	174
1977	4,390	17.4	172
1978	7,790	16.8	177
1979	9,988	16.0	177
1980	9,664	15.7	174
1981	9,778	15.8	174
1982	10,990	15.2	172
1983	11,809	14.8	167
1984	12,004	15.4	171
1985	12,474	15.6	169

TABLE IV

SEEDSTOCK SECTION
61 Active Users

	BOARS			GILTS		
	NUMBER TESTED	AVERAGE BACKFAT (mm)	AVERAGE AGE (days)	NUMBER TESTED	AVERAGE BACKFAT (mm)	AVERAGE AGE (days)
Yorkshire	1829	14.1	159	3106	15.4	167
Landrace	647	14.7	156	1057	15.5	161
Lacombe	460	14.9	162	614	15.8	168
Hampshire	215	13.2	169	252	14.0	172
Duroc	212	13.8	157	212	15.2	159
Crossbred	2135	14.4	153	4006	16.2	167
Total	5498	14.3	157	9247	15.8	166

COMMERCIAL SECTION
23 Active Users

Yorkshire	46	14.8	173	13	14.0	166
Landrace	13	14.0	166	34	14.9	176
Lacombe						
Hampshire						
Duroc						
Crossbred	84	13.9	174	3104	15.4	179
Total	143	14.2	173	3227	15.4	179

OVERALL TOTALS

	5641	14.3	157	12474	15.6	169

TABLE V

HOME TESTED BOARS - BY BREED

	1985			1984		
BREED	NUMBER TESTED	AVERAGE BACKFAT @ 90 kg (mm)	AVERAGE AGE @ 90 kg (days)	NUMBER TESTED	AVERAGE BACKFAT @ 90 kg (mm)	AVERAGE AGE @ 90 kg (days)
Yorkshire	1875	14.1	159	2320	14.0	157
Landrace	660	14.7	156	569	14.8	155
Lacombe	460	14.9	162	575	14.9	163
Hampshire	215	13.2	169	217	12.9	169
Duroc	212	13.8	157	295	13.5	163
Crossbred	2219	14.4	154	2188	14.0	155
TOTAL:	5641	14.3	157	6,164	14.1	157

HOME TESTED GILTS - BY BREED

	1985			1984		
BREED	NUMBER TESTED	AVERAGE BACKFAT @ 90 kg (mm)	AVERAGE AGE @ 90 kg (days)	NUMBER TESTED	AVERAGE BACKFAT @ 90 kg (mm)	AVERAGE AGE @ 90 kg (days)
Yorkshire	3195	15.4	167	3928	15.2	165
Landrace	1091	15.5	162	903	15.8	161
Lacombe	614	15.8	168	666	16.0	168
Hampshire	252	14.0	172	242	13.5	172
Duroc	212	15.2	159	185	14.8	166
Crossbred	7110	15.8	172	6080	15.6	176
TOTAL	12,474	15.6	169	12,004	15.4	171

The Pork Industry Branch assisted Alberta's pork producers in several other ways. The Pork Production Handbook was distributed to over 1,500 producers and interested parties on request. The Alberta Swine Record System was distributed to over 500 producers. A research review column and a column with questions on nutrition written by Branch staff appeared in the quarterly Western Hog Journal, with a circulation of about 25,000. The Pork Production Home Study Course was distributed on request, and the original printing of 2,000 was entirely depleted. Staff have served as resource persons, helped organize over 25 local extension meetings, seminar and series courses throughout the province. They were involved in the planning and staging of the Alberta Pork Seminar (100 attending), the Alberta Pork Congress (about 3,000 attending), the John Gadd seminar (150 attending), four regional swine breeding seminars (175 attending), meetings of the Alberta Swine Breeders Association, the Western Hog Growers Association, the Southern Alberta Hog Producers Association and the Alberta Pork Producer's Marketing Board district and annual meetings.

The swine specialists with district agriculturists helped deliver the Pork Industry Branch's swine extension program. Many farm calls were recorded by specialists. These involved questions on nutrition, engineering, herd health, finance, breeding, servicing A.I. and R.O.P. programs, investigations for A.D.C., feed test results follow-up, ventilation problems, planning visits and work with local veterinarians, feed company personnel, swine building engineers, regional economists, local district agriculturists and others. Groups of producers were brought together in production plus clubs; office interviews and telephone interviews were a means of communicating better production methodology.

Specific activities recorded by specialists included the following:

Lethbridge: The Swine Record Keeping Program for province-wide distribution was mailed on request. This program continues to have a strong demand with 500 distributed to date in the province. Extension Seminars were resourced and organized in Regions I and II. A major seminar at Red Deer was coordinated in February. An agricultural Lenders Workshop was held. Office interviews and farm calls made up a large part of activity this year. Client telephone contacts, agribusiness contacts and department contacts continued as last year. The specialist served as a member of the regional Farming for the Future program review committee. Many consultant calls relating to agricultural lending were made. A computerized cash flow analysis program was updated and used in counselling.

An on-farm demonstration trial with canola meal in swine rations was completed.

Red Deer: The regional specialist chaired the Education Committee for the 12th Annual Pork Congress. A 21 day breeding calendar was jointly developed with the A.I. centre. A seminar was held for area bankers, an in-house district agriculturist swine course and a Green Certificate nutrition course were also put on. The specialist developed an on-the-job training program jointly with Olds College. He joined an ad hoc committee to develop a "sandwich" pork production course at Olds College starting in 1987. Farm calls totalled 139 and numerous office interviews and phone calls were handled, relative to swine management and financial questions.

Vermilion: In fiscal year 1985-86, a total of 57 farm calls were carried out and 382 interviews were conducted (clients visiting or phoning the office). Two articles were written and published in the Hog Journal. Two district seminars (Lamont, Two Hills) were resourced. The specialist also resourced a Provincial Basic Nutrition Course at Olds. He completed three canola trials in the region and analyzed the results. A CRD on outdoor sow housing and finishing of swine was completed in cooperation with the regional economist. The specialist worked closely with Green Certificate trainees and trainers throughout the year. He was also involved in Green Certificate testing.

During the past year, eight AADC loan proposals were evaluated. Information was also provided to FCC for use in their loan approvals. Three counsellor requested farm calls were carried out. The specialist met with industry personnel throughout the year. He attended pork seminars and provincial swine seminar. He helped at pork industry booth and chaired sessions at the pork congress. On-farm demonstrations on the robotic sow and with hulless barley were initiated for the upcoming year. Numerous phone calls on Red Wattle hogs were received this past year.

Barrhead: An Agricultural Lenders Seminar on hog production was organized at Spruce Grove. Approximately 42 bank managers and agrologists from various points in the region attended. Interaction between department and bank staff proved to be very beneficial. Lenders indicated they want more of these seminars.

With the assistance of the Regional Farm Training Specialist, a four day Basic Swine Nutrition Course for Green Certificate trainees

was organized and held at Olds College. Green Certificate trainees in hog production plus other interested participants found the course to be very useful.

In a combined effort with the Canola Council of Canada, two on-farm demonstrations on feeding canola meal to growing-finishing pigs were conducted in the region. These two demonstrations, two of seven projects in the province, were conducted to show swine producers the benefit of using alternate and locally grown protein ingredients in swine rations. Overall results from all trials were very favorable. Producers have been keenly interested in results from these trials and the potential savings they may obtain by using canola meal.

Following discussions within both the swine and beef/dairy regional planning groups, a monthly newsletter for producers was initiated. This newsletter, "Beef'n Bacon" was mailed either directly or through D.A. offices to approximately 2,500 swine and beef producers, veterinarians, feed manufacturers, etc. in the region. Beef'n Bacon was designed as a major livestock winter program to provide extension material to producers during a period where normal extension activities and meetings were expected to be reduced. Response to this newsletter has been greater than anticipated. Many follow-up contacts have been made as a direct result of articles in the newsletter.

The Western Hog Journal "Research Reviews" column was coordinated from this office. The specialist wrote eight research reviews on various topics for the column during the past year.

He assisted other swine specialists in the organizing of a major swine seminar for producers interested in achieving top production.

Approximately 150 producers attended the Red Deer seminar with many from this region. Response from producers was very favorable as there appears to be a definite need for seminars of this calibre for the dedicated hog producer.

Through the Regional Swine Planning Group, a series of four swine breeding seminars was organized for the province during, April, 1986. These seminars were organized in cooperation with the Alberta Swine Breeders Association, Western Hog Growers and the Alberta Pork Producers Marketing Board. Approximately 175 producers attended these informative seminars which included information on changes to the grading system and a new genetic evaluation program for producers. Producer organizations responded very favorably with this joint extension activity.

The specialist assisted in planning, promotion and resourcing of other major swine program, i.e. Alberta Pork Congress (Red Deer), Swine Consultant's Workshop (Lake Louise), Alberta Pork Seminar (Banff).

He assisted in organization and resourcing of 11 swine producer extension meetings, completed 68 farm visits, 124 office calls and numerous telephone conversations with producers on various aspects of swine production and management. ADC and other lending institutions were assisted with numerous client loan evaluations and operation and management assessments. The specialist assisted in the review and promotion of the Alberta Pork Production Handbook factsheets, the Pork Production Home Study Course, Alberta Swine Record System, Swine R.O.P., A.I. and herd health programs.

He participated as a member of the Regional On-Farm Demonstration Review Committee and the Alberta Pork Seminar Planning Committee.

RED MEAT STABILIZATION PROGRAM

The Pork Industry Branch administered the Alberta Red Meat Interim Insurance Payment and the Tripartite Price Stabilization Program for Red Meats in Alberta in the past year.

Both programs were designed to reduce loss of income to producers of red meats due to low market returns. The Red Meat Interim Insurance Payment was in effect from January 1, 1985 until the Tripartite Price Stabilization Program took effect January 1, 1986. The interim program provided support payments for slaughter cattle and hogs in the second and third quarters, and for sheep in the third quarter of 1985 as indicated by the support formula for the proposed tripartite program. Payments were not made in other quarters of the year, nor was any support payment made for cow-calf (feeder calves) operations because prices were above the tripartite formula support levels. The amounts paid out were reduced by the premium level that would have been required. The government of Canada, through the Agricultural Stabilization Board, repaid $11.5 million to the government of Alberta for the portion of this payment representing that payable under the Agricultural Stabilization Act. Payments made under this program were as follows:

Livestock Class	Support Period	Per Head Payments Total (Less Premium)	Federal ASA Share	Alberta Share	($M) Total Paid
Slaughter Cattle	Q2, 1985	$22.86	-	$22.86	$ 6.4
	Q3, 1985	$79.75	$28.22	$51.53	$23.3
Slaughter Hogs	Q2, 1985	$10.11	$ 2.02	$ 8.09	$ 5.2
	Q3, 1985	$14.30	$ 4.51	$ 9.79	$ 7.2
Lambs	Q3, 1985	$ 1.40			$0.03
TOTAL					$42.1

A total of 8,125 producers received payments of which 3,526 were for hog producers, 3,820 were for slaughter cattle producers and 779 were producers of both cattle and hogs. Lamb payments were made to the Alberta Sheep & Wool Commission. These producers received payments for sales of 572,473 head of cattle, and 1,016,068 hogs.

The Tripartite Price Stabilization Program for Red Meats went into effect in Alberta January 1, 1986, with the signature of three federal agreements by the Alberta Minister, one each for cattle, for hogs and for lambs. Four price stabilization schemes were thus established for slaughter cattle, for cow-calf (feeder calves), for hogs and for lambs. The cost of support under these programs are borne equally by the federal and provincial governments and the participating producers on a 1/3 each basis. National committees for each of these species (cattle, hog and lambs) were established and have met several times to set up program mechanisms and to recommend policy. Deadlines for initial enrolment were set as June 15 for the slaughter hogs and lambs schemes; and June 30 for the cattle schemes. The support levels calculated for the first quarter of 1986 indicated no payouts under any of the schemes.

The slaughter cattle scheme will make a payment in any calendar quarter that the national average margin (national average price less national average cash costs of production) is less than 50% of this margin on average for the same quarter in the previous five years. Similarly, the slaughter hog scheme will make a payment in any quarter that the national average margin is less than 95% of the average margin for the past five years.

The cow-calf (feeder calves) and lamb schemes are based on 10 year moving average prices indexed for inflation. For cow-calf producers, support payments are made for a calendar year if the national average calf price in a year is less than 85% of the indexed moving average price for calves in the previous ten years. For lambs, support levels are calculated quarterly, and payments will be made in any quarter that the national average price of lambs is below 95% of the indexed moving average price for the same quarter of the previous ten years.

Premiums are payable by producers and both federal and Alberta governments under the program. The premiums are adjusted to a level that will cover anticipated support payments.

POULTRY BRANCH

General Conditions

Nineteen eighty five has been a relatively stable year for the poultry industry. The egg and turkey sectors continue to operate within a national agency and protest the agency imposed cutbacks. The hatching egg and broiler sectors are operating outside of national agencies, but these growers still find themselves operating under production cutbacks. Feed prices have edged lower, and when the feed grain market adjustment is included, an overall decrease of approximately 10% occurred during the year. Egg price changes and broiler meat prices have resulted in little change in producer margins. Broiler chicken producers are facing lower returns in 1986. Broiler breeder quota allocation increased to 85% of base. No boards increased their quota base during 1985.

The move to make quotas saleable for the various poultry commodities progressed somewhat during the year. If and when quotas become readily saleable without property, there will be some realignment within the industry.

Problems of surplus production still plague the poultry industry. Commercial egg producers saw their levy go to 9¢/doz., largely to remove surplus eggs. Broiler growers opened the new year with burdensome stocks of chicken meat on hand and these stocks have contributed to a subsequent decline in producer prices. There appears to be little hope for quota increases on the part of commercial egg producers (88%), or broiler hatching egg producers (85%). It appears that increases in demand are being more than offset by increased rates of lay on the part of birds presently in the field.

Broiler Breeders

The broiler breeder sector of the poultry industry increased to 85% of the quota level for this period of time. With the increase in poultry meat production all egg production was utilized and a few hatching eggs were brought into the province. During the year this sector held regional meetings in which the formation of a National Agency was discussed. At the annual meeting of the Alberta Hatching Egg Marketing Board the producers voted in favor of joining a National Agency which will set production levels within Canada and control the importation of hatching eggs and chicks. The Alberta Hatching Egg Marketing Board will have to get the approval of Alberta Agriculture before they can join into a national plan.

Eggs

The 1985 laying flock of 1,931,600 layers was 1,503,600 regulated and 428,000 unregulated layers.

The production of eggs from Alberta increased during this period from 34,508,000 dozen to 38,124,000 dozen or an increase of 10.5%. This increase reflects the change in rate of lay from 19 to 21 dozen for hens in regulated flocks. The movement of eggs into the province showed a decrease of 7.7% for a total of 8,960,000 dozen or 172,000 dozen per week to accommodate the market demand for Alberta. The opening of a new retail food chain in the Edmonton area in 1985 changed the marketing patterns of eggs and poultry products, and it will take some time before adjustments are made.

Domestic table egg disappearance fell 0.4%, while the domestic consumption of processed eggs rose for the third consecutive year by 2.4%. The processed eggs share of the overall Canadian market reached 10.9% in 1985.

The commercial egg marketings through registered egg stations were 34.56 mln dozen in 1985 compared to 34.80 mln dozen in 1984, a decrease of 0.7 showing the decrease in ungraded brought into the province, plus increases in quota utilization and hen production in Alberta.

Broilers

In Alberta, chicken production showed an increase of 4.3% for a total of 40.387 mln Kg of all chicken, compared to 38.707 mln Kg in the year 1984. The year 1985 ended with very high production levels which continued into the first three months of 1986, resulting in very high storage stock levels. This combination resulted in weaker producer prices, lower retail prices, and may result in increased consumption of chicken meat. The trend in Alberta is to move to a greater percentage of the chicken market being served by fresh product as compared to frozen. Cornish, roaster and regular weight ranges recorded production increases. Per capita disappearance increased by 1.3 Kg, or 7.2%, and gives a 10 year average growth rate of 4.2%. The Canadian per capita consumption registered a 7.8% increase over the period. The Alberta Broiler Grower's Marketing Board voted not to join the National Chicken Agency.

Turkeys

The total turkey marketings through registered stations in 1985 shows 9.37 mln Kg as compared to 9.65 mln Kg in 1984, for a decrease of 3.0%. The turkey disappearance rose by 1.4% during this period.

Branch Programs

Administration

The purpose of the Administration Section is to develop and administer regulations, policies and programs relative to the industry under the Livestock and Livestock Products Act.

Poultry branch programs were related to increasing poultry production, improving efficiency, and thus farm income, and keeping poultry products competitive with other protein sources.

Research

The Department developed the Research Institute with the University of Alberta. The Poultry Branch was part of the departmental team which developed the guidelines for the Poultry Research Chair and the selection of qualified researchers to fill the positions at the University. Funding for poultry applied research to be conducted at the University of Alberta poultry unit was provided from the Poultry Branch budget.

Poultry Health

The purpose of this program is to prevent and control poultry diseases, to safeguard the public health.

All breeder flocks and hatcheries were monitored with emphasis on salmonella detection and reduction in cooperation with the Animal Health Division. This program is designed to increase agriculture production by reducing the number and kinds of disease producing organism in poultry and their environment with emphasis on salmonella, because of the public health significance of these organisms. This increased production has led to improved income for the poultry producers of this province.

The poultry health program is broken down into a number of areas. These are:

1. Hatchery Sanitation Program (Fluff Sampling)

Chick fluff samples analyzed were 38 from the Lethbridge area; 243 from the Calgary area; and 450 from the Edmonton area. The number of chicken flocks represented by fluff samples totalled 1,242 indicating a monitoring sampling of 10.5 times for each approved hatchery supply flock. The turkey flock sampling totalled 40 indicating 8.0 fluff samples per flock.

The following table gives a complete summary of this program and lists the salmonella isolations which were found in the samples:

Total No. of Tests	Salmonella Isolated	Hatchery
Chicks 731	S. (not typed)	Co Op Lethbridge
	S. (not typed) (2)	Co Op Calgary
	S. nienstedten	Roselee
	S. senftenberg	Rochester
	S. (not typed)	St. Paul
Turkeys 40	S. arisonae	Co Op Edmonton
Total 771		

	1981	1982	1983	1984	1985
% S. isolations (chickens)	1.47(6)	0.79(4)	0.79(8)	0.96(7)	0.82(6)
% S. isolations (turkeys)	nil	10.43(3)	2.38(1)	6.38(3)	2.50(1)

2. Chicken Health Program

The Poultry Branch staff worked with all hatching egg shippers with special emphasis on individuals who had salmonella isolations. The following table gives the laboratory submissions for the year. The table shows the laboratory workloads for this program of the Animal Health Division and the activities of the Poultry Branch.

Table 1

	Flock Placements			Type of Submissions			
Territory	Broiler	Egg-Type	Total	Rep	Lay	1st Hatch	Total
1 (Leth. Lab)	21	-	21	21	22	19	62
2 (Cal. Lab)	19	6	25	24	27	21	72
3 (Edm. Lab)	31	4	35	29	28	26	83
4 (Edm. Lab)	22	25	47	34	41	35	110
Total	93	35	128	108	118	101	327

There has been a slight decrease in the percent salmonella isolation in 1985 (11.6%) as compared to 14.5% in 1984. Table 2 gives a clear picture of this area of our program and the problems which are found:

Table 2 Percent Chicken Salmonella Isolations

	Replacement	Brooding	Laying	1st Hatch	Total
No. of submissions	108	-	118	101	327
No. of positive (+)	2	-	31	4	38
% positives -1985	2.8	-	26.3	4.0	11.6
% positives -1984	10.1	-	24.8	7.4	14.5
-1983	6.2	-	20.0	2.4	10.0
-1982	1.9	-	14.3	3.6	6.9

The constant percent isolation of salmonella in environmental samples at time of lay and the consistently poor fluff sample ratings in Alberta hatcheries have caused a joint Federal/Provincial Hatching Egg and Hatchery Hygiene Study to be implemented. At the hatchery egg producer level increased egg sanitation management is being encouraged and monitored by the use of Rodac plates.

3. Turkey Health Program

We have only four turkey breeder flocks in Alberta. The following is a summary of the monitored submissions:

Terr.	Flock Placements		Type of Submission		Hatches					Total
	Heavies	Lights	Replacement	Laying	1	2	3	4	5	
1	-	-	-	-	-	-	-	-	-	-
2	1	-	1	1	1	1	1	1	1	7
3	2	-	2	2	2	2	1	1	2	12
4	1	-	1	2	1	-	-	-	-	4
TOTAL	4	-	4	5	4	3	2	2	3	23

Some of the turkey supply flocks have had a problem with fowl cholera.

4. Hatching Egg Supply Flock Approval

The number of flocks and birds under this program has changed very little in the past couple of years as shown in the following results:

Chicken

Year	No. of Flocks		Average Flock Size		No. of Birds	
	Egg	Broiler	Egg	Broiler	Egg	Broiler
1981	30	88	1643	3926	49,278	345,520
1982	26	106	1979	3822	51,465	405,187
1983	27	90	1976	4040	53,345	363,616
1984	29	94	1988	3412	57,653	341,565
1985	32	90	1739	3556	55,648	320,073

Turkeys	No. of Flocks		Average Flock Size		No. of Birds	
Year	Lights	Heavies	Lights	Heavies	Lights	Heavies
1981	1	6	3,650	3,743	3,650	22,460
1982	-	2	-	6,225	-	12,450
1983	-	2	-	6,900	-	13,800
1984	-	4	-	4,600	-	18,400
1985	-	3	-	6,150	-	18,450

One small flock of 900 bronze (heavies) were also approved in 1985.

The Alberta Hatching Egg Marketing Board has raised their quota level from 80% to 85% during the latter part of this period and this will result in more broiler breeders in the province.

General

1. Poultry

During this period three permits from B. C. for a total of 29,300 white leghorn chicks were received. This compares to a total of 44,379 chicks in 1984. Thirteen permits for a total of 18,350 pheasant chicks were submitted.

Ten I.L.T. disease outbreaks were diagnosed throughout Alberta by the Regional Veterinary Laboratories. Producers were visited.

2. Rabbits

Rabbit extension information packages were mailed to 117 enquiries. Ten individual calls were made to rabbit raisers for various reasons.

Processing figures indicate approximately 18,270 rabbits, mostly fryers, were slaughtered in Alberta in 1985. This figure indicates an increase of approximately 6,400. Renewed interest in processed rabbits is evident in the Bonnyville area by the Iron River Meat Processors.

Economic Studies

There is a continual demand for factual and updated information on costs of production.

A fair amount of time has been spent with farmers reviewing and assisting with loan applications. Loan applications came from A.D.C., F.C.C., and many of the banks asking for reviews and comments.

During this period, the Branch developed cost of production models for shell eggs, broiler chicken, turkeys and broiler breeders. These models will be updated with current data and the cost of production information will be used as we deal with our requests in the area of economics.

A number of poultry farms were sold during this period and our staff reviewed loan applications and worked with a number of parties before the properties were finally sold.

Extension

Our role in extension has been to interpret and impart to the industry and to the general public, technical, scientific, economic and general information on poultry production. Throughout the year our staff made 747 farm calls, plus 293 calls to the allied trade. They attended 213 meetings including both industry and department meetings.

We continue to work with a wide range of producers varying from the large commercial farms to the acreage holders with a few birds. Staff have been requested to speak at meetings varying from the specialized Agriculture Lender's Workshop to small flock seminars and country fairs.

In February 1986, the Poultry Industry Conference was again held in Red Deer. The Egg Marketing Board, the Hatching Egg Board and the Turkey Marketing Board all held their annual meetings and the Chicken Marketing Board held an information meeting in conjunction with the Conference. There was also a very impressive area of displays set up at the Conference. The Poultry Serviceman's Workshop held at Lake Louise in October again drew good attendance and good comment. Major poultry shows were held at Calgary, Wetaskiwin and Lloydminster.

Year	Alberta Agric. Layer (Average/month)	Alberta Agric. Total Eggs Dozen (Average/month)	Reg. Stations 15 doz. boxes	Producer Av. Wt. Price
1984	1,956,210	2,875,730	2,320,000	97.0
1985	1,931,600	3,177,000	2,304,000	93.4

Poultry Eviscerated in Registered Stations

Chicken (Kilograms)

Year	Under 1 Kg	1-2 Kg	Over 2 Kg	Total
1984	1,585,000	34,912,000	2,210,000	38,707,000
1985	1,781,000	36,266,000	2,340,000	40,387,000

Turkey (Kilograms)

Year	Under 5 Kg	5-8 Kg	Over 8 Kg	Mature	Total
1983	1,784,000	3,605,000	3,185,000	97,000	8,671,000
1984	1,999,000	3,853,000	3,667,000	132,000	9,650,000
1985	2,003,000	4,063,000	3,108,000	187,000	9,361,000

Chick and Poultry Placement by Type

	1984	1985
*Egg Production	2,435,000	2,449,000
Broiler Chickens	30,600,000	30,596,000

	1984	1985
Broiler Turkeys	482,000	422,000
Heavy Turkeys	1,187,000	1,211,000

*females only

Ducks, Geese and Pheasants Killed at Alberta Inspected Plants:

	1985 (Head)
Ducks	21,000
Geese	28,000
Pheasants	12,000

Licensing

Year	First Receivers	Reg. Egg Grading Stations	Reg. Poultry Stations	Egg Packing Stations	Buy & Sell Rejects	Hatcheries	Custom Killing Stations
1982	3	18	10	5	29	16	-
1983	3	18	10	3	31	14	-
1984	3	20	10	3	26	11	1
1985	2	17	9	1	28	13	1

Farm Cash Receipts $

	1984	1985
Eggs	46,000,000	46,000,000
Poultry	96,000,000	89,000,000
	138,000,000	135,000,000

REGULATORY SERVICES AND FEEDER ASSOCIATIONS BRANCH

This branch was responsible for the administration of certain Acts and their respective Regulations.

This regulatory function provides a protection service for livestock producers in the following areas:

- Brand inspection services
- Brand registration
- Licensing and bonding of livestock dealers and agents
- Licensing of stockyards and stockyard operators
- Provide for protection of land and agricultural products from livestock running at large
- Conducting investigations of fraudulent trade practices in livestock trading
- Check scales and equipment used in making railgrade settlements on cattle

The Feeder Associations Guarantee Act enables members of feeder associations to acquire financing for the growing and finishing of livestock.

BRAND RECORDING SUMMARY

	Cattle	Horses	Sheep	Total
New Brands Issued	1,220	409	-	1,629
Transfers	648	89	0	737
Certified Extracts	0	0	0	0
Cancelled Brands	418	63	0	481
Brands Renewed	9,891	1,445	3	11,339
Brands Re-issued	106	28	0	134

The number of brands in good standing at December 31, 1985 was 53,345.

Cattle	45,778
Horses	7,555
Sheep	12
	53,345

A total of 1,954 cattle and 397 horse and one sheep final notices were prepared and mailed in January. In addition, 11,153 cattle, 1,708 horse renewal and 3 sheep renewal notices were received from Computer Services in mid-May, finalized in Stettler and mailed during the latter part of June and September.

During the year, a total of 53 livestock auction markets and 57 livestock assembly stations were in operation. In addition, 8 markets were licensed permitting them to hold 5 sales or less during the calendar year, one market was licensed permitting them to hold 10 sales or less during the calendar year, two markets were licensed permitting them to hold 9 sales or less during the calendar year, and 1 market was licensed permitting them to hold a one-day sale only.

During the year, a total of 3,120,443 head of livestock were brand inspected. This was a decrease of 61,710 head from the previous year.

Summary of Kinds of Livestock Marketed for Five Year Period

	1985	1984	1983	1982	1981
Steers	1,009,742	1,073,745	1,064,912	1,058,912	997,992
Heifers	816,068	829,956	826,477	811,997	713,275
Cows	403,559	410,945	359,595	371,270	337,573
Calves	547,811	527,733	476,268	489,687	443,299
Bulls	86,102	88,441	80,932	86,912	75,892
Yearlings	215,113	209,489	196,573	223,340	275,967
Buffalo	140	135	0	0	0
Mares	16,999	16,318	15,279	14,647	14,689
Geldings	14,401	15,391	15,203	14,615	15,325
Fillies	2,952	2,644	2,650	2,417	2,234
Stallions	3,652	3,985	4,138	4,159	3,716
Colts	3,648	3,169	2,488	2,448	2,208
Mules	256	202	150	228	308
TOTALS	3,120,443	3,182,153	3,044,665	3,080,632	2,882,478

Comparison of Branded Livestock Inspected for Last Five Years

	1985	1984	1983	1982	1981
Branded Livestock	73.6%	74.7%	74.7%	73.1%	74.9%
Livestock Not Branded	26.4%	25.3%	25.3%	26.9%	25.1%

Summary of Inspections

Year	Terminal Yards	%	Auction Markets	%	Packing Plants	%	Other Inspection	%
1985			1,885,912	60.4	962,585	30.9	271,946	8.7
1984			1,920,531	60.4	993,561	31.2	268,061	8.4
1983			1,802,681	59.2	1,035,047	34.0	206,937	6.8
1982			1,843,342	60.0	1,034,254	33.6	192,623	6.4
1981	366,379	12.7	1,312,403	45.5	997,101	34.6	206,073	7.2

Permanent Brand Inspectors

	# of Inspectors		Lstk. Inspected		Lstk. Insp. Per Man	
Location	1985	1984	1985	1984	1985	1984
Brooks	2.90	2.63	236,546	234,716	81,567	89,245
Calgary	6.50	7.00	345,457	416,559	53,147	59,508
Clyde	2.42	2.31	172,741	163,901	71,380	70,952
Edmonton	8.00	10.06	343,184	352,532	42,898	35,042
Grande Prairie	2.13	2.00	58,972	50,904	27,686	25,452
Hardisty	1.43	1.44	98,147	103,026	68,634	71,545
Lethbridge	6.99	5.47	470,702	460,681	67,339	84,220
Lloydminster	2.00	2.00	91,720	90,708	45,860	45,354
Medicine Hat	1.39	1.48	72,315	73,995	52,025	49,996
Ponoka	3.25	3.70	185,955	184,816	57,216	49,950
Red Deer	4.90	4.73	320,119	307,332	65,330	64,975
St. Paul	1.17	1.10	32,044	21,937	27,388	19,942
Strathmore	1.00	1.00	86,079	86,204	86,079	86,204

During 1985 our brand inspection staff questioned 130,734 head of livestock for bills of sale and held the proceeds on another 29,181 head pending proof of ownership. The proceeds on 9,355 head were released to others than the contributor.

Investigations in 1985 resulted in requests for computer retrievals on brand information and as a result, 336 names and 1,019 brands were pulled.

Cattle Exports - 1985

Month	B.C.	Sask.	Man.	Ont.	Que.	USA	Others	Total
Jan.	1,916	5,991	338	12,501	440	4,797	267	26,250
Feb.	2,046	2,474	225	13,928	-	22,636	44	41,353
Mar.	1,735	5,083	338	15,616	218	28,767	90	51,847
Apr.	1,913	5,163	1,066	8,105	596	20,118	91	37,052
May	2,951	5,300	1,331	6,637	489	9,974	-	26,682
June	1,765	2,866	215	1,927	102	5,586	136	12,597
July	1,537	2,789	314	5,152	-	3,954	33	13,779
Aug.	1,970	5,085	777	6,655	551	4,349	78	19,465
Sept.	1,762	4,522	1,987	7,717	686	2,757	4	19,435
Oct.	1,579	5,664	729	34,066	2,327	3,659	17	48,041
Nov.	982	4,302	339	42,314	1,415	4,127	5	53,484
Dec.	732	4,223	572	8,928	241	6,235	139	21,130
1985	20,888	53,462	8,231	163,546	7,065	117,019	904	371,115
1984	28,246	47,611	9,759	165,081	8,903	103,262	1,635	364,497

During 1985, 496 missing or stolen cattle reports were received. Following is a summary of these reports for the last three years.

Missing or Stolen Cattle Reports

	1985	1984	1983
Total Number of Report	496	498	492
No. of Head Reported			
Missing or Stolen	1,471	1,303	1,275
No. Found	329	373	236
No. not Found	1,142	930	1,039

Under the Stray Animals Act, 1,408 head of livestock were impounded during the year. A total of 1,247 head were returned to the rightful owners after they paid the costs of capture, transportation and maintenance. The balance of 161 head were sold by public auction and the net proceeds after costs were deposited into general revenue.

There were 935 livestock dealers and agents licensed during 1985 compared to 941 the previous year. Twenty claims were received against four livestock dealers' bonds during the year.

Six branding demonstrations were conducted in various parts of the province with good local participation.

Feeder Associations in Alberta

1984-85

During the year, 36 feeder associations operated under the Feeder Associations Guarantee Act.

During the fiscal year, 43,699,555.76 worth of credit was used to purchase 98,287 cattle and 5,255 sheep. The amount outstanding as of August 31, 1985 was $26,298,580.63.

Corresponding figures from one year ago are 91,497 cattle and 4,517 sheep. The amount outstanding as of August 31, 1984 was $22,395,655.66.

In the summer of 1985, approval was granted by Order-in-Council to the Rockyford Feeder Association Co-op Ltd. to commence operation.

Knee Hill Valley East Feeder Association remained inactive and had its loan limit reduced to zero. Membership has decided to dissolve the association.

Innisfail Feeders Association suspended activity due to the depletion of the assurance account brought on by an outstanding loan.

Litigation between Mayerthorpe Feeders Association, Royal Bank of Canada and O.A. Brown completed with Mayerthorpe Feeders being awarded the funds from the sale of contested cattle.

The Feeder Associations of Alberta Ltd. asked Alberta Agriculture to consider regulation changes and/or clarifications concerning the feeding of cows, multiple-family contracts and an increase in the individual lending limits (from $50,000 to $60,000).

1984/85 Feeder Association Year End Report

Association	Cattle	Sheep	Total Credit
Acme	1,331		619,356.09
Andrew	547		208,236.21
Barrhead	5,802		2,981,952.29
Bashaw	876		354,602.20
Battle River	3,988		1,844,956.13
Big Valley	1,759		675,304.42
Blindman	10,901		4,574,413.00
Bonnyville	1,486		695,317.74
Bowden	3,856		1,773,937.80
Carstairs	1,071		496,660.44
Colinton	2,081	111	839,239.74
Delburne	1,040		451,833.84
East Olds	4,262		1,716,806.84
Flagstaff	3,664		1,783,653.20
Fort Macleod	659	857	324,658.83
Glenwood	1,130		475,391.23
Grande Prairie	1,557		612,434.16
Great West	986		440,048.89
Hardisty	5,607		2,396,800.60
Innisfail	-	-	-
Lakeland	1,136		434,465.69
Little Bow	3,595		1,633,732.61
Mannville	1,068		395,803.19
Marwayne	4,226		1,952,445.35

Association	Cattle	Sheep	Total Credit
Mcleod River	334		183,645.58
North Peace	2,121		816,441.77
Paddle River	1,759		829,184.87
Parkland Stavely	1,602		745,781.43
Pincher Creek	1,131		510,968.19
Ponoka	3,724		1,549,209.59
Prairie River	2,014		873,399.43
Raven	4,204		1,883,719.42
Red Deer	9,881	4,287	4,954,252.00
S. Eastern	478		172,318.91
St. Paul	1,072		495,980.72
Westlock	7,339		3,002,603.36
Total (84/85)	98,287	5,255	43,699,555.76
(83/84)	91,497	4,517	37,626,821.65

Summary of Feeder Association Operations

1980-1985

Feeding Season	No. of Assn.	Cattle	Sheep	Amount of Credit
1980-81	37	63,151	3,441	28,157,530
1981-82	38	68,710	4,080	27,761,209
1982-83	33	75,917	5,895	32,585,619
1983-84	37	91,497	4,517	39,626,822
1984-85	36	98,287	5,255	43,699,556

Staff Changes

Brian Nicol joined the brand inspection staff at Lethbridge replacing Randy Schmidt who resigned.

Bernie Welch who was on staff since June 1965, went on long term disability due to illness.

Linda Hughes joined our Stettler staff replacing Myrtle Scott who resigned.